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ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE AFFECTIONS OF THE SKIN INDUCED BY TEMPERATURE VARIATIONS IN COLD WEATHER.

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The consideration of the subject which is somewhat indefinitely announced in the title of this paper, possesses for the inhabitants of this part of the country, some importance. The subject involves a study of the changes induced in the skin of many persons subjected to the vicissitudes of the winter weather in the northwestern part of the United States; and its importance is derived from several considerations. Among the latter may be named the noteworthy difference in the behavior of the skin of different individuals thus exposed; the fact that this variability is in a minor degree subject to influences quite distinct from atmospheric changes; and last, but not least, though in part resulting from the reasons just stated, the fact that many persons are quite ignorant of the

chief etiological factor in the production of these diseases, some even going so far as to deny with positiveness its causative operation.

A very moderate clinical experience establishes the fact that the change from a relatively high to a relatively low temperature, less often the reverse, is more efficient in the production of these skin disorders than a temperature which is for some time uniformly registered at a low point. Briefly and figuratively it may be said that it is not so much the shrinkage of the mercury to a low point, as its rapid play from one point to another that begets the mischief. It is unquestionably true, that the skin of many persons sympathizes with the summer variations of temperature, as, for example, that from 60° to 80° F., or from 70° to 90° F., which may often be recorded in this latitude in twelve hours of time. But it must not be forgotten that the winter changes are fully as abrupt, and, though possibly less noticed, are, as regards their influence upon the skin, probably far more effective. Here in the winter even greater variations occur, as from twenty degrees below zero to twenty above.

In the skin, which is the subject of the changes about to be described, the dip of the mercury in the thermometric tube may be held to be a rough index of the degree of aggravation of the cutaneous malady; but it would be fallacious to conclude that the sole etiological factor in each case was the coldness of the air alone. Patients who remain, during one of these periods of increasingly cold weather, in an apartment uniformly heated to a perfectly comfortable temperature, suffer, naturally, to a less extent than others, but do none the less suffer from the change in the atmospheric condition. Allowance should be made for the fact that the head, and often the shoulders, hands, and arms of one who sleeps in a warmed

bed-chamber, are exposed somewhat at night to the lowered temperatures that are usually attained before the fires are radiating a greater supply of heat in the morning, but more must be admitted. There is something more efficient than even the transitory exposures to the cold air experienced in the opening of doors and windows. Thus the skin of certain infants, once affected by the disorders under consideration, who occupy chambers that are day and night kept by steam or other artificial heat at a fixed and perfectly comfortable temperature, will resent the change of condition in the atmosphere outside. What magneto-electric, chemical, or other modifications, may accompany the rapid transference of a great quantity of heat to its latent state upon the surface of the earth, need not be particularly discussed here. It is quite possible, even allowing for these, that a great retardation of the mode of motion we call heat, may necessarily involve the retardation or acceleration of other modes of motion, whose waves we may be at some time able to measure, and whose force to estimate in pounds.

Given one thousand human skins exposed to these influences, and, as we might readily understand from *a priori* reasoning, there will be in many, perhaps even a majority of them, no pathological results. This goes without saying. 'Tis the same when an equal number of persons swallow an indigestible aliment, of whom only a few suffer from diarrhœa. Even in the severest epidemics of yellow fever, thousands of the unacclimated escape. Unfortunately, in the present case, the proportion of those who suffer to those who enjoy immunity, cannot be statistically stated.

Naturally, those who suffer, suffer in different degrees. Here is a wide field opened.

The milder forms of these affections are familiar to all.

Almost every one recognizes the condition and appearance of the "chapped" hands, of the roughened faces, of the "frost-bitten" lips, nose, cheeks, and ears, and of the "chilblains" that affect the feet and hands. As the parts named are, to a greater extent than others, exposed either to the action of the weather or to objects chilled by this exposure, there is little or no difficulty in persuading the victims of these accidents as to the precise cause of their trouble. The difficulty, and this is often well-nigh insurmountable, arises when the action of cold air extends beyond the points of exposure, to the general surface of the body covered by the clothing. If the sturdy English of the last century had coined similarly homely phrases for "chaps" and "chilblains" of the skin covered by the clothing, there would have been far less reason for this present writing.

One of the commonest expressions of the resentment of the general surface of the skin is a decided cutaneous pruritus. Dr. Duhring, of Philadelphia, was first to describe this condition under the title, Pruritus Hiemalis, and the affection, as named by him, has received proper recognition by several foreign writers. It may be doubted, however, whether in the British Isles and upon the continent of Europe, whose climate is so happily modified by the gulf stream, the disorder is to be observed in anything like the severity and to the extent known here. Several circumstances, to which reference is made later in these pages, lead me to the conclusion that the region known as the Northwest, is occupied with a population which suffers from this and similar affections far more than do the dwellers upon either the eastern or western sea-board of this country.

The skin, which becomes the seat of this affection, is either gradually or suddenly involved, in persons of both sexes and all

ages, and this independently of the previous habits of the sufferer as respects the bath. The cutaneous surface may be harsh, dry, rough to the touch, even exhibiting an exaggerated picture of the condition known as "goose-flesh," or be perfectly natural in appearance, soft, smooth, supple, and the seat of all normal secretions. The subjective sensations experienced in it may be first noticed in the cool weather of the autumn, or in mid-winter, or even during the relatively mild weather of the early spring, after the severity of the colder season has abated.

This subjective sensation is an itching, tingling, pricking, or burning, varying from the mildest and localized grades to the severest, affecting the entire bodily surface. Like most of the affections attended by cutaneous pruritus, the sensation of distress is decidedly aggravated after retiring to the bed at night, and this because of, first, the fatigue of the nervous system, which is usually greater at that hour; second, the change of temperature at the surface of the body necessitated by the change of clothing preparatory to occupation of the bed; third, the opportunities for scratching afforded by that change; and fourth, the increased vascular tone of the skin when re-heated within the bed-clothing. Another and usually milder exacerbation occurs on rising in the morning. During the day, when the attention of the nervous system is distracted by social and business engagements, and when the bodily clothing preserves the temperature of the surface at a relatively uniform point, there is less distress. A sudden or unguarded exposure, however, to the sources of heat or cold during the hours of the day, will often exceedingly annoy the sufferer. Thus, the physician who removes the clothing of his patient in order to inspect the covered surface of the body, will often find that he has in this way provoked an access of pruritus.

In all grades of severity, the disorder is either completely relieved or greatly mitigated by the advent of milder weather, or by removal to a more temperate climate. The tormented skin will often, however, in this latitude retain the souvenirs of its accidents till late in the spring.

The next picture presented clinically in this affection of the skin is a simple sequence of the pruritus described above. It results solely from the scratching practiced in order to relieve the itching. Here the skin is rubbed, torn, or abraded by the finger-nails or articles employed to supplant these, and becomes in varying degree the seat of resulting inflammatory changes. Pin-head-sized and larger reddened papules usually discrete, often aggregated in patches, occasionally widely separated, their apices torn or capped with a minute blood-crust, spring from a sound, a reddened, or an infiltrated integument. The streaks left upon the skin by the finger-nails are recognized as two, three, or four radii of linear abrasions, corresponding in number to the number of fingers used, either parallel, as when the hand is drawn like a rake over the skin, or, as Hebra pointed out, converging, when the thumb is rested upon the skin and made the *point d'appui* for the fingers approximated to it with such mischievous intent. Pushed to a still greater extent, this traumatism induces a severe artificial dermatitis or eczema, the skin becoming infiltrated, angry, reddened, excoriated, and fissured. Vesicles, pustules, and papules are seen, not often, however, intermingled, and the resulting crusts may be conspicuous, commonly having the superficial character and light tints of desiccated serum.

Now, it is a curious fact, that many patients in this condition are well aware of the fact that they have produced all the eruptive lesions themselves, and that the pruritus was the *fons et origo* of the whole disorder. A single well-directed ques-

tion to this class of sufferers will at once throw a flood of light upon the diagnosis. But it is a much more singular fact that few, indeed, volunteer this statement. This is one of those puzzles that human nature, when subjected to critical examination, is constantly presenting to the physician. I cannot, as I write these lines, recall, in my entire experience, more than two or three instances when this precious bit of knowledge was given to me unasked. Many, it is true, are ignorant of the real state of the case. But whether informed or not of the fact, no one need depend upon question and answer for arriving at the proper conclusion. An inspection of the patient will furnish even more precise knowledge on this point.

On careful examination it will be seen that the lesions of the cutaneous surface exist either solely or in great preponderance upon the parts of the body most accessible to the hands. These are, in the order of frequency and for reasons that need not be named, first and prominently always the inside of the thighs; next, the outer faces of the buttocks, the upper and anterior portions of the legs, the popliteal spaces, the forearms and arms, the genital region in males, more particularly the front of the scrotum and the skin of the penis, the lower portion of the belly, and the infra-clavicular regions. Only the most determined and persistent scratcher attacks the interscapular space, below the scapular spines. Here, if anywhere, the skin will be seen either, as is almost the invariable rule, entirely destitute of lesions, or exhibiting a few scarcely irritated papules. Perhaps comparison will furnish better results. Thus, in the most severe cases of pruritus, the calves will suffer less than the tibial regions; the axillæ less than the groins; the small of the back less than the lower belly. It is a pure question of accessibility, and the story is writ large on the face of the body.

It is an unfortunate appanage of many skin disorders that they are liable to become greatly aggravated by the mischief which they indirectly determine. Thus, the man who strains in an effort to expel his engorged prostate from his rectum, and the woman who cannot avoid the attempt to swallow her swollen tonsil, commonly add to the acute inflammatory condition of these glands. A similar chain of events can be traced here. The pruritic skin, at last, not only itches far more in consequence of the traumatism inflicted upon it, but the traumatisms themselves, with the dermatitis they awaken, are more weather-sensitive than at the outset of the trouble.

Another form of cutaneous disorder under the influence of the atmospheric changes here considered is an eczema, usually of the papular type, occurring primarily, without marked precedent pruritus and independently of traumatism. Upon this point it is needful to speak with some caution. For there are patients who affirm that they have not scratched or otherwise wounded the skin, who have really produced this result in the unconsciousness of sleep; and, as Kaposi has well shown, the skin which is at one point the seat of an exudative affection is often so sensitive that the irritation occurring at this point may be the sole exciting cause of similar trouble at a distant point. Still, making allowance for all this, there are some patients who actually exhibit lesions due solely to the effects of climate.

As indicated above, the lesions are commonly pin-head-sized papules, reddened in various shades, the color being modified by the natural tint of the skin in different persons. They may be aggregated in patches, but are much more often widely dispersed and irregularly distributed over the surface. They are, as a rule, not most abundant in the several regions of the body already enumerated, unless the intervention of scratching has altered the natural features of the disorder. They may be

associated with equally minute vesicles, or, more particularly in regions where the skin is delicate in structure, be in part transformed into such serum-containing lesions. Thus it is not rare to discover one or more of these papules capped with tiny vesicular apices at the roots of the fingers or in the interdigital spaces, the patient demonstrating to his physician the fact that they "contain water," by expressing a droplet of clear fluid from an isolated point. Similar lesions may often be found at the wrist, over the skin of the penis, and on the breast of women; and, when untorn, they are rather persistent, usually undergoing involution without forming a crust.

When the skin in this condition is subjected to scratching, the eruptive picture is very nearly that when the pruritic condition precedes the eruptive phenomena. But little difference between the two can be recognized in the case of dispensary patients, who exhibit, as a rule, the severer types of the disease. Patients of intelligence, observed in private practice, who carefully watch the integument and compare its condition one day with that of another, will often take great precautions to keep the hands from wounding the skin, and thus be able to point out with some exactness the evolution of individual lesions in some part of the body.

Other of the varieties of eczema may be similarly induced and similarly modified, less often, however, than that just noted. Pustular lesions are more often seen among the poorer class, when the surface of the skin has been long unwashed; and, as a result, the crusts they exhibit are more bulky and more deeply colored.

In the eczema of the cold season, not preceded by cutaneous pruritus, the character of the clothing worn plays some part in its production, though it is a minor one. The edge of the linen cuff and of the rough overcoat or cloak-sleeve playing at

the wrists, evokes a plentiful crop of lesions at these points; and a similar result is obtained where the collars fret with their edge the neck. Woolen gloves during these seasons, are particularly prejudicial to the backs of the hands, where a really formidable eczema rubrum may develop. It must be admitted that the brilliant, aniline-dyed under-garments that are responsible for so much mischief in the warmer days of the summer when they are moistened with the sweat, are comparatively harmless when the mercury approaches the zero point. This must be due to the fact that in winter the skin is less often macerated with sweat, for day-laborers engaged in work that produces free prespiration in winter, exhibit the poisonous effects of these dyes. It may be said, in passing, that in order to set aside all possibilities of damage, these garments should be at all times interdicted to patients with cutaneous affections.

In yet other cases, the skin expresses its resentment of the atmospheric coldness, by a rebellious form of chronic urticaria. This is rather more common in women and children than in men. The wheals are evanescent, usually of small size, and sparsely or plentifully developed over the portions of the body covered by the clothing. In the warmth retained by bed-clothing, they become especially annoying. A common form is the papular wheal, sparsely scattered over the shoulders, about the waist, and over the arms, the lesions being often abraded by the nails in scratching. Care must be taken not to confound this condition with that in which the urtication is purely the result of such traumatism. When inspected in the hours of the day succeeding a night of distress from this source, one commonly finds on the skin of women who are thus tormented, only a few rosy or pinkish striæ or puncta, at the sites of the departed wheals. The natural appearance and condition of the integument in many of these cases, presents a striking contrast with

the history, which is often detailed with the eloquence of feeling. Sleep during these accesses is quite forbidden; and the nervous system, as it suffers, contributes its share to the aggravation that is apt to follow. Exasperating recurrences are to be expected with each decided change in the temperature of the air.

There is another class of patients who suffer at these crises of cold weather with furuncles, which form about the buttocks, and in the skin and subcutaneous tissues of the thighs, neck, hands, arms, and legs. These are often multiple, but rarely formidable in size or depth of involvement of the tissues. They occur both within and beyond eczematous patches, and even in persons who have suffered from only the more trifling of the eruptive disorders enumerated above. Many patients in this category cannot be recognized as suffering from "the depressed state of the system" commonly assigned as the cause of furunculosis. They are often indeed in a condition of sound general health, the boils resulting solely from the cutaneous irritation.

Lastly, it is proper to remark, in passing, that the variations of atmospheric temperature in cold weather may exert an unfavorable influence upon several skin affections of widely diverse origin, even upon those dating from the summer season. Among them may be named, typical eczema capitis of infants with seborrhœic complications, and the psoriasis of adults. These and others by aggravation or recrudescence testify to the influence of the season. It is understood, of course, that there are many patients who suffer from cutaneous diseases that are greatly ameliorated in the winter months.

Having thus briefly summarized the conditions in which the skin may be placed by the action of temperature changes in cold weather, I desire in the following pages to discuss more par-

ticularly certain questions of diagnosis and etiology which are thus naturally suggested. These questions occur more frequently in the presence of pruritus hiemalis, papular eczema, and the changes induced in both by the traumatism of scratching. According to the view which they take of these questions, the most of patients and too many physicians may be divided into two classes; the first, those who believe them to be due to parasites: the second, those who charge that they result from "impurities in the blood."

Touching the opinions held by the first class, it may be remarked that there are few counties in the Northwestern States that do not, popularly speaking, possess an itch called by a name of their own. Many are at one in contenting themselves with the widely accepted term, "prairie itch," which covers a great deal of ignorance and may be well relegated to a place by the side of the "army-itch," whose history did not survive the few years of civil war. Other names no less suggestive of a popular belief as to the origin of these troubles, have no better *raison d'être*. There are schools, and schools of belief in these questions. Many hold that the cause is a "microscopic animalcule," others, that the disease is really scabies, as a result of which, vain attempts are made for weeks at a time to relieve the eruptive disorder by inunctions of sulphur-containing salves. For five years past, I have been in receipt annually of a number of letters from intelligent physicians in Dakota, Nebraska, Minnesota, Iowa, and portions of Illinois, whose contents are so similar that they correspond to a remarkable degree. The writer usually announces that in the neighborhood where he is engaged in practice, a peculiar form of "itch" has appeared, affecting the greater number of all the inhabitants of the region, men, women and children; eminently contagious in character; and incurable by the ordinary meth-

ods of treatment. Some of these correspondents declare, that "every one has it." These letters are alike also in the fact that they commonly begin to appear in the late autumn or winter, and cease in the spring.

Of course it would be improper to decide positively on the diagnosis of cases of disease, without a personal and critical examination of the patient. But occasionally, a selected representative of this class of sufferers has been presented to me, in the person of some well-to-do farmer, anxious for relief and ready to incur the expense of a trip to the large cities in the hope of securing it. In every one of the cases presented, the sufferer has been found affected with some one of the disorders of the skin described above.

A few weeks ago, the following announcement appeared in the public press:

The Itch.—Louisville (Ky.) *Times:* Louisville has the itch. So have Jeffersonville and New Albany. It is probable that 5,000 people about the falls are daily applying antidotes for the old-fashioned malady remembered by the children of twenty years ago as the "itch." The remedy then was a nightly greasing from head to foot with hog's lard and sulphur. That is also the remedy now. The malady's introduction is credited to the recent influx of tramps from the North. The physicians estimate that every twentieth person in Louisville has it, and say they are kept busy in consultations and writing prescriptions, while the druggists are besieged by people in search of a cure.

The "tramps from the North," in this instance, were most probably the series of cold waves from the Manitoba region, which have lately been surpassing their usual limits and reaching with unwonted severity even over some of the Southern States.

While we certainly should not venture to diagnosticate diseases which we have never seen, we are not left without a basis

of fact from which to reason about them. A few years ago, we had not, in this country, any such data. But now, the returns compiled by the Statistical Committee of the American Dermatological Association, furnish valuable testimony on such points as these. It has been objected to these returns that they claim to be what they are not, viz., statistics of all the skin diseases that occur throughout the country. No claim could be more preposterous. The very objection involves the one feature for which these statistics are really valuable. They are not gathered indiscriminately from all sources, but are solely obtained from careful records made by a few men at widely different points in the country, each of whom has special facilities for the observation of skin diseases, and a reputation for some skill in their diagnosis. Consequently, one chief objection to the mass of medical statistics in general, is here eliminated.

From the year 1878 to 1882, this committee reported 58,617 cases of skin diseases of all kinds; and the total number of cases of scabies included in the list was but 665, that is 1.10 per cent. The year 1884 was an exceptional one as regards scabies. Out of 9,329 cases of cutaneous diseases, reported by these gentlemen from Boston, New York, St. Louis, Chicago, and Canada, there were 339 cases of scabies. This relatively great increase was largely due to local causes, however; for of these cases, Boston reported 179, and accompanied these figures with a note calling attention to the increase. It is interesting to specify that of the cases collated in 1884, only 33 were seen in private practice, the remainder, 306, being observed in dispensary or public patients.

When we look to the several countries of Europe for information on this point, we find that Scotland enjoys an unenviable preëminence in the preponderance of itch. In 1873, Dr. Mc-

Call Anderson, of Glasgow,* classified ten thousand consecutive cases of skin disease occurring in the public practice of his city, and of these no less than 2,527 were cases of scabies. Of one thousand consecutive cases of skin disease occurring there in private practice, only 44 were classed as scabies.

In the year 1868, the late Sir Erasmus Wilson† collated the statistics of 5,000 consecutive cases of skin disease, as they occurred among the "wealthier classes" in Great Britain. Of this number, 184 only suffered from scabies.

Now, looking further into these facts, it is apparent that both in Scotland and America, these figures are derived from observations made in cities. It is in the large capitals of Europe that the poor and the filthy are closely congregated; furnish thus the best culture-field for acari; and from them, by annual emigration, the American colonies have been regularly recruited. It is for this reason that the seaboard cities of this continent are always able to report a somewhat larger proportion of cases of scabies than can the cities of the interior; and, as for the country towns in the interior, the ratio of from one to three per cent. of the same disorder to all cases of skin disease falling under the observation of physicians, must be greatly reduced.

Once it was different. In the old Colonial and Revolutionary days, our ancestors had come so lately from the country where the itch prevails, that the accidents of their former environment were retained to an uncomfortable extent. One can scarcely look over the small news sheets of that period without seeing several advertisements calling attention to some specific, vaunted for the itch. These notices, indeed, supplied the pabulum for the journalists of this day, that is now

* On the Treatment of Diseases of the Skin, 1873.
† Jour. of Cutaneous Medicine, vol. I., 1868, pp. 389.

derived from the enterprise of the men who sell "liver-pads" and "blood purifiers." Gradually the people of the country began, in a large sense, a life of independence; and in proportion as they did this, they ceased to suffer from the itch. The country was too large, water too abundant, soap too cheap, and big cities too few, to furnish sufficient encouragement to the *sarcoptes hominis* to linger here long. But when the year 1861 found the country embarrassed with a civil war, hundreds of thousands of its citizens were congregated in regiments, camps, prisons, barracks, and hospitals. Among them were many newly arrived immigrants, who enlisted almost as soon as they landed; and brought the itch once more into conditions so like those in which it flourishes in the overcrowded cities of Europe, that the acari again bred freely on this continent. When the war was ended, and the soldiers returned to their country homes, again the proportion of scabies to other cutaneous disorders gradually declined to the point represented by the figures given in the consolidated five-years-report of the statistical committee to which attention has been directed above. It is interesting to note that a similar proportionate increase and subsequent decrease in the number of cases of scabies recorded in England was observed after the return of the British army from the Crimea.

It follows, then, that if there are "5,000" persons in Louisville suffering from the itch, and thousands more in the cities of the Northwest, from which the reports come that "every man, woman, and child in the town" is affected with the same disease, it is one of the most exceptional and surprising facts in the medical history of this country, and quite unequaled by anything known to exist in the old world.

Still, and this is a matter of great moment, if there are even from one to three per cent. of all cutaneous diseases which

depend upon the presence of acari, it is highly important that the symptoms of their presence and ravages be well understood. No man is so good a diagnostician as he who understands the exceptions to the rule. For that reason it will not be out of place to look for a moment into the features by which scabies is to be differentiated from the pruritus and eczemas that furnish the real theme of this paper.

They are all, indeed, surprisingly alike. The reason for this resemblance is clear. In all, the skin is greatly irritated; in the one case, by cold air; in the other, by a parasite attacking the skin. The result is the same, a pruritus differing in degree in different cases, but which may be as severe in one disease as in another. Then follows the scratching, which gives almost the same clinical portrait to each of the affections named. No wonder they resemble each other. No wonder that the physicians in Louisville are reported to be rubbing sulphur salves over their tormented patients. The plates illustrating scabies in Hebra's superb atlas will answer very well indeed for many typical cases of the diseases now prevalent in the Northwestern States. Hebra had in his life observed 40,000 cases of scabies, and drew a masterly portrait, which is to-day unrivaled, of that affection. But it may be doubted whether he had in all his experience encountered the skin diseases which most closely resemble the clinical picture he has drawn of scabies, for the climate in which he lived does not seem to have supplied them to his wards. It was reserved for an American, and after him an Englishman,* to first name and describe the disease as it occurs in ruder climates than that of Austria. We might, however, believe, after a perusal of their papers, that neither of these two eminent writers, for

* See Mr. Jonathan Hutchinson's paper on "Winter-Prurigo," Lectures on Clinical Surgery, vol. I, p. 100. London, 1878.

the same reason, appreciated, when they wrote, the extent and gravity of this group of disorders as they occur in the northwestern part of this country in the season of winter.

Naturally, the first point to which we turn in the study of the differential diagnosis of scabies, is its contagiousness. One excellent author describes this disorder as "highly contagious;" and we know that it may be communicated by the shake of the hand. But we must make some reserve here. While scabies may be communicated by hand-shaking, it is rarely so communicated. I have again and again handled patients affected with the disease without incurring any unpleasant results in my own person; and it is a well-known fact that in the amphitheatre of medical schools and hospitals, patients with scabies are frequently passed around among physicians and students for close personal examination, with the rarest effect of spreading the disease in this way. There are several facts which must be considered in this connection. In the first place, the acarus family find nutriment, shelter, and all they require for comfort on the person of the individual whose skin they inhabit; and there is no great inducement for them to colonize upon a strange skin at the instant of the first opportunity offered. In the second place, the transfer of a male acarus alone, from one person to another, would not ensure a generation of the young. In the third place the unimpregnated female could not alone accomplish a large success as regards a progeny; and as for the impregnated female, Hebra on several occasions failed to induce scabies when one such only was transferred intentionally to a sound skin and seen to penetrate it. Lastly, the eggs alone would not suffice, for these have to be nicely planted within the epidermis, in order to be hatched safely to maturity. In brief, only the more intimate contacts of the bed at night, and the application of nails charged with

acari of both sexes, especially the young, are to be regarded as most effective for the transmission of the disease. That is one reason why nearly seven men are found to be affected with scabies to one woman. Women are, as a rule, more inclined to sleep alone, or with those only to whom they have family ties; while laborers, boys, apprentices, and persons of that class, including those who are strangers to each other, at times occupy the same beds, especially in the large cities where they are often huddled together at night like swine. Everything said and done, scabies is one of the filth diseases; while the winter disorders of the skin affect all classes alike; women as much as men, those who wash as much as those who do not wash, the occupants of the mansions of the wealthy and of the cottages of the poor. Indeed, when any disease affects equally all classes of society, its cause should always be sought among the more common rather than among the rare agencies of the generation of disease. Parasitic will probably be always numerically fewer than non-parasitic disorders. The general involvement of all or a very large number of people at one time in a given community, points always to a disease-cause of very wide operation; and such a cause, in the winter diseases under consideration, can be recognized in temperature changes in the atmosphere.

Nothing, however, could be more untrustworthy, than the testimony as to the origin of their disease, given by patients who have been subjected to the operation of that cause. They will often describe with astonishing minuteness the occasion of their infection, and the particular individual from whom they contracted their disease. In this way, the joint occupancy of a bed with a friend or a stranger; the apartment of a hotel in which they have been guests; the wearing of garments loaned them by their friends; and even

more casual accidents of personal contact, are urged as the mode by which their disease was transmitted to them.

Looking, next, closely to the eruptive phenomena in scabies, it is needless to say that the burrow made by the female acarus as she penetrates the epidermis, is regarded as a pathognomonic symptom. But it should not be forgotten that the burrow may be wanting, or not discovered; first, because the acari actually upon the skin have not yet excavated these tunnels; or, second, because the fingers have torn the skin so as to disguise the lesions. In the first case, time will reveal a difference; and in the second, a more careful search must be made for the intruders.

When the burrow exists, it can be most perfectly recognized in the inter-digital spaces and on the skin of the penis, as a tangential line, running from a vesicle, papule, or pustule, to a distance of from one-eighth of an inch to an inch. It resembles a beaded, dotted, yellowish, or blackish thread, the color being more pronounced in comparison with a fresh colored and washed skin, and less marked in contrast with a soiled surface; being, in a soiled and subsequently washed integument, most conspicuous in proportion as the small puncta have served to entrap particles of dirt. The cuniculus may be curved, angular, or tortuous; and occasionally may be seen well nigh completely covered by a bulla, pustule, or vesicle extending its entire length. In such cases, however, the female always penetrates beyond the peripheral wall of such lesion, working her gallery beyond it and more deeply, lest she be lifted by the exudation out of reach of the succulent rete where she feeds.

The intruder may be recognized always at the terminal extremity of her gallery, for it is now known that she does not in her life-time leave it for any purpose, as was at one time taught. The female acarus here shows as a minute, whitish,

clearly defined dot, presenting a contrast in this particular with the blackish fæces in the gallery behind; and may be, in a good light, by a person of some dexterity and fair eye-sight, extracted on the point of a cambric needle, from her lodging point. It is important to know that this parasite may be recognized by the unaided human eye; and its characteristic tortoise-like body exhibits most of its anatomical peculiarities under a glass enlarging the figure but one hundred diameters. It is not, therefore, a "microscopic animalcule, totally invisible to the eye," which is often claimed to be the cause of the disorders forming the theme of this paper, but is an object that was recognized by man before he ever looked through the first microscope. In the last century even, "old women" obtained a reputation for the discovery and extraction of the itch-mite from the human skin; and the many sharp-eyed practitioners in the Northwest, in the middle hours of even the shortest days of the winter, are surely able to do as much and more.

The "head" of the gallery is usually whitish, where the parasite first entered the skin; and is also more elevated than the "tail," where the acarus rests after laying its dozen or more of eggs. At times, the entire cuniculus forms an elevated ridge, rather than a thread-like depression, with white dots along its summit. When the roof of the vesicle at "the head" is torn off by scratching, the effect is to produce a reddened spot at its site, surrounded by a whitish moat running around the spot to the entrance of the gallery.

The itching which results from this epidermic tunnelling is severe, and noticeably more severe than would be suggested by the moderate number of skin lesions visible. When these lesions (puncta, vesicles, pustules, blebs, papules, resulting crusts, furrows, excoriations, etc.,) are found upon the hands, the itching becomes so great that the infested person scratches

also the accessible parts of the skin, where there were originally no acari, such as the inside of the thighs, the lower belly, etc., as Hebra suggests, simply because they are "handy." Hence it is that the picture comes to resemble that of all pruritic and scratched skins. The regions affected by the eruption are the palms (especially of women and children) and dorsal surfaces of the hands; the sides and roots of the fingers, and toes; the wrists; the feet (and, especially in women, the delicate skin of the feet near the instep, partly dorsal, partly plantar in situation;) the buttocks, (more particularly in those who are seated in the trades and occupations of life); the extensor faces of the joints; the belly; the penis, in men; the anterior folds of the axillæ; the nipple and breast of women; and the elbows and knees, rather than the popliteal space and bend of the elbow. Hebra points to the fact that between two parallels, one drawn through the nipples, and another at a short distance above the knees, on the anterior face of the body, can be recognized the greater part of the eruptive lesions in every case of scabies, where the skin has been well scratched. He adds that pustules on the buttocks are almost conclusive evidences of the presence of the acarus in cobblers and workmen who sit at their trade; that pustules on the fingers and toes, and of the hands and feet, especially in children, are almost equally conclusive evidences of the malady; and that other regions pressed upon by clothing, such as those touched by trusses, pads, corsets, etc., are places where the parasite multiplies freely. The exemption of laundresses, persons employed in public baths, and those whose occupation requires much application of soap and water to the surface, has been noted by several authors. In infants, the parts brought into contact with the breast and hands of the mother and nurse, are those most apt to be involved; such as the face, the palms of the

hands, buttocks, and, indeed, when infants are at the breast, all parts of the body.

Lastly, as regards the progress of the case, the winter disorders described above are better and worse according to the temperature changes in the atmosphere, and are not benefited to any appreciable extent by the external use of parasiticides; while the course of unrelieved scabies is ever toward a steady aggravation, being readily arrested with, at the worst, sequelæ of a mild eczema, when properly treated.

I have devoted so much space to the important question of the distinction between the winter diseases of this part of the country and scabies, that space is not left in which to do justice to the opinions held by the second class of patients described above. These believe that the maladies of the skin here discussed are due to "impurities of the blood." This is an old doctrine. It dates from the period of the "melancholic juices" of Galen, and suggests that aphorism of Hippocrates, in which it is declared that "when furfuraceous particles are discharged along with the thick urine, there is scabies of the bladder." It runs like a blood-red strand through almost every cord used since in medicine, wherewith to tie up a bundle of errors. Even the itch did not escape this misfortune, after it had been demonstrably produced by the presence of acari. One of the forlorn pictures presented by dermatology to the history of medicine is that representing the eminent Devergie, writing in 1877,* with a full knowledge of all the damage produced in the skin by the presence of the sarcoptes hominis, that he "attributes a secondary importance to the acarus in the itch," and that this malady can be "spontaneously induced." The internal remedies that have been administered for relief of the itch no man can number. Unfortunately,

* Traité Prat. des Maladies de la Peau, Paris, 1877, p. 565.

the "blood purifying" remedies employed in the winter diseases of the skin almost invariably aggravate the latter. The worst phases of these maladies are those in which the salts of potash, mercury, and arsenic have been pushed to the fullest extent, in the vain hope of thus securing relief.

The therapeutic problem presented is this: first, to allay the irritability of the skin; second, to relieve the eruptive symptoms, whether these be the result of traumatism or of the action upon the skin of the cold air; third, to accomplish these results when the major cause of the disease is periodically in full operation, since it is obvious that the number of sufferers is far too great to admit of their general removal to a more temperate climate; fourth, to accomplish these results without the use of anodynes and narcotics to induce sleep at night, the most of which in the end aggravate the disorders by their secondary effects upon the nervous system; and, lastly, to set aside the minor causes of aggravation of the disease, in a skin rendered unduly sensitive by the operation of the major cause described.

As these pages have already surpassed the limits originally intended, the consideration of this part of the subject must be deferred to a second paper.

ARTICLE II.

REPORT TO THE GYNECOLOGICAL SOCIETY OF CHICAGO ON TWO CASES OF EXTRA-UTERINE PREGNANCY FROM EXAMINATION OF THE SPECIMENS *presented by* CHRISTIAN FENGER, M. D., *Surgeon to Cook County Hospital, Professor of General Pathology and Pathological Anatomy, Chicago Medical College. Member of the American Surgical Association.*

[Read before the Chicago Gynecological Society, Feb. 20th, 1885.]

Mr. Chairman and Gentlemen of the Society: The exact anatomical diagnosis or minute classification of an extra-uterine pregnancy is easy enough in the early stages of the disease, but it becomes more and more difficult in the latter half and towards the termination of the pregnancy.

In the earliest months of the pregnancy, it is only by accident that a pathological specimen is found. Here the exact diagnosis is easy enough. From the third to sixth months, specimens are secured by operation or after death, as the result of hæmorrhage from rupture, and here the diagnosis is still comparatively easy.

In the latter half of pregnancy, from sixth to tenth months, the diagnosis, viz., exact location of fecundated ovum, becomes often exceedingly difficult, next to impossible, on account of secondary changes, and often partial destruction of Fallopian tubes and ovaries, and still more difficult, if a fatal peritonitis has contributed to mask the normal anatomical features of the organs in question.

The two specimens, sent to me for examination, belong to the class of late and consequently difficult cases, and in one of them the specimen was very much decomposed. Nevertheless, I think that a close examination of the specimens permits of a

comparatively exact classification of the two cases; at least, of one of them.

Before describing and demonstrating the specimens, permit me to recall to your memories the different forms of extra-uterine pregnancy.

Extra-uterine Pregnancy.—The ovum is arrested somewhere in its normal passage from the Graafian follicle down to the *cavum uteri*, or drops out of the passage, without or after rupture of the latter, into adjoining cavities or spaces.

1. *Ovarian Pregnancy.*—The ovum remains in the ovary. *Epi-ovarian Pregnancy.*—The ovum develops on the ovary, having left the Graafian follicle.

2. *Abdominal or Peritoneal Pregnancy.*—The ovum falls down into the peritoneal cavity, and does not enter the Fallopian tube at all.

3. *Tubal Pregnancy.*—

I. Tubo-abdominal or tubo-ovarian pregnancy.

II. Tubal pregnancy.

III. Tubo-uterine, or interstitial or mural pregnancy.

4. *Extra-peritoneal Pregnancy* in the broad ligament after rupture of the Fallopian tube.

5. Pregnancy in one side of a *uterus bicornis.*

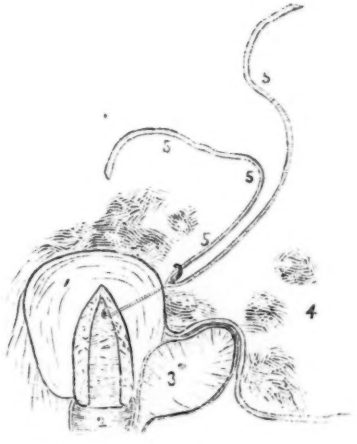
6. *Secondary Abdominal or Peritoneal Pregnancy.*—Ovary, tube, or even uterus (*bicornis or normal*) is ruptured, the fœtus slips into the peritoneal cavity, but remains in connection with the primary sac.

I shall first describe and demonstrate Professor Byford's CASE, NO. 2.

The uterus is large, four and a half inches long, three inches broad, at the fundus; the cavity also considerably enlarged. In *left* side of uterus and vagina, I find an incision opening, three and a half inches long, closed with silk sutures,

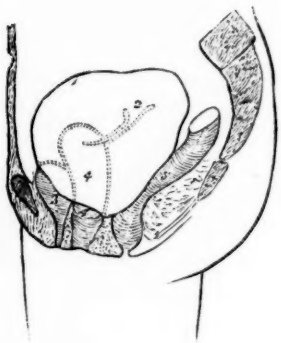
leading from the uterus and vagina into the sac, or as some members of the Society called it, the adventitious uterus. The sac can only be seen in fragments. Its wall is one to two lines thick, the outside partly covered with peritoneum, partly adherent to the surrounding organs, viz., bladder, uterus, omentum. The rectum I do not find. Right ovary and Fallopian tube are missing.

The left Fallopian tube shows the following conditions: the uterine portion is of normal size, passable only for a thin probe, one-half mm. in diameter; at the distance of one-half inch from the fundus, it is wider, one-eighth of an inch in diameter, and so it continues for four inches; then it suddenly dilates to one inch in diameter, continues so for one inch, and thereafter opens into the fœtal sac, the wall of the latter going continuously over into the wall of the tube.



CASE II Fig. 1.—Anterior view of sac and pelvic organs, left Fallopian tube laid open except in its uterine portion.

1. Uterus.
2. Vagina.
3. Bladder.
4. Inside of fœtal sac.
5. Fallopian tube dilating and opening into the fœtal sac.



CASE II Fig. 2.—Sac and pelvic organs seen from the left to show situation of sac.

1. The sac.
2. Dilated end of Fallopian tube opening into or continuous with the wall of the sac which partially covers the following organs :
3. Bladder.
4. Uterus.
5. Rectum.

The left ovary cannot be found. Large shreds of the membranes of the ovum, viz., amnion and chorion, adhere to the sac here and there. Inside of sac is dark, brown-spotted, the color of decomposed blood. This condition is most pronounced in the part of the sac that covers the posterior wall of the bladder and the anterior and posterior walls of the uterus. On the uterus, the sac is thinner and more adherent (no sub-serous connective tissue) than on the bladder, where the wall of the sac is about two mm. in thickness, firm and movable against the bladder.

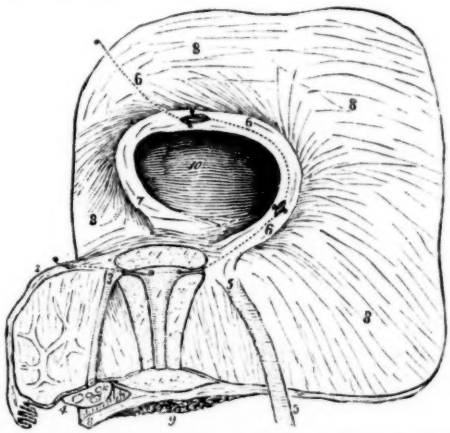
From the condition in which we find the left Fallopian tube, I think it safe to conclude that the ovum has developed in its outer half, near the abdominal end of the tube. The funnel-shaped dilatation of the tube in this place and the thickening of its wall, which continues uninterruptedly as the wall of the fœtal sac, prove the connection between the two cavities, and

this case of extra-uterine pregnancy would thus be of the *tubo-abdominal* variety. I believe that the ovum has commenced its development in the tube, and then, with or without rupture of the latter, has formed its sac on the surface of the pelvic and surrounding abdominal organs. In this respect, it might be classified as a secondary abdominal or peritoneal pregnancy, originating in the abdominal end of the left tube.

PROFESSOR BYFORD'S CASE, NO. 1—This case has a greater interest, partly because the specimen is in a good state of preservation, and partly because some of its features seemingly point to one, others to another of the varieties of abdominal pregnancy.

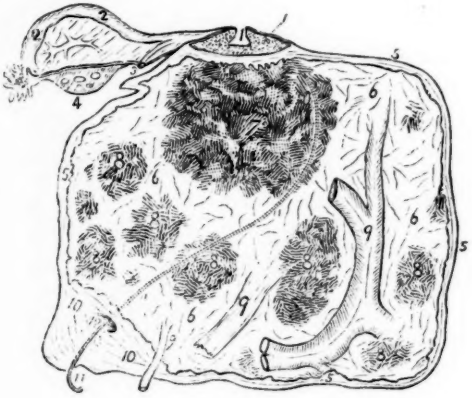
In this case, as will be remembered, laparotomy was performed, and part of the cyst, the placenta and the upper two-thirds of the uterus removed. I shall not undertake, here, to describe the child, as it is irrelevant to the matter in question.

We find the uterine appendages of the right side, viz., broad ligament, round ligament, Fallopian tube and ovary normal, (vide Case 1, Fig. 1.)



CASE I Fig. 1.—Anterior view of uterus, its appendices and the extra-uterine sac.

1. Uterus laid open, fine silver wires passed through the uterine portion of both Fallopian tubes.
2. Right Fallopian tube.
3. Right round ligament.
4. Right ovary.
5. Left round ligament, enlarged but in normal position, viz., commencing at upper corner of uterus.
6. Ridge or the upper free border of the pocket (10) containing the left Fallopian tube through which silver wires (dotted lines) are passed. It is seen that the Fallopian tube only passes through the first two-thirds of the ridge, and then branches off, backwards and downwards (dotted line) to penetrate into the wall of the sac.
7. Terminal end of the ridge—probably the left ligamentum ovarii.
8. The sac.
9. Place of the placenta.
10. Pocket on upper posterior wall of sac.



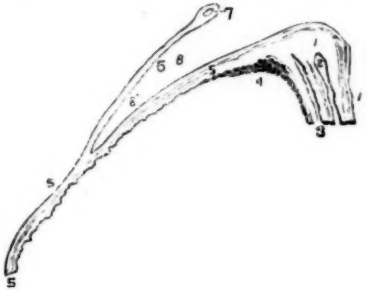
CASE I Fig. 2.—Inside of the extra-uterine sac seen from below.

1. Uterus—transverse section of the neck, where the uterus was amputated, shows the open cavity of the neck.
2. The right Fallopian tube.
3. Right round ligament.
4. Right ovary.
5. The wall of the sac.
6. Inside of sac, with
7. Place of the placenta right behind the neck of the uterus.
8. Accessory placenta places.
9. Large vessels on and in the inside of the sac.
10. Place where the outer layer of the wall of the sac is separated from

the inner layer because the wall has been cut obliquely here at the operation.

11. Probe in the left Fallopian tube.

12. Oval opening on the inside of the outer layer of the sac, viz., termination of the Fallopian tube or cross-cut of the Fallopian tube just before it (probably) opened into the cavity of the extra-uterine sac.



CASE I Fig. 3.—Sagittal section through the uterus and the sac showing the pocket on the posterior wall of sac.

1. Uterus.

2. Cavum uteri.

3. Space (dissected) between posterior wall of the uterus and anterior wall of the sac.

4. Place of the placenta on inside of sac behind the uterus.

5. Wall of the sac.

6. Posterior wall of the pocket, that is, the tubular or Fallopian fold of the left broad ligament.

7. Left Fallopian tube, cross-cut showing its lumen.

8. Pocket between 5 and 6.

The uterus, amputated about the middle of the neck, is of normal size, viz., the cavity, one and one-quarter inches between the two uterine orifices of the Fallopian tubes. Farther down, one inch, still lower down one-half inch, and in the neck one-fourth inch, broad. The average thickness of the uterine wall is one-half to three-fourths inch. To the left and behind the uterus and in uninterrupted connection with its surface is the sac or adventitious uterus. Fig. 1 shows the uterus and sac seen from the anterior side. From the anterior surface of the sac, one-fourth inch from the left corner of fundus, is the left round ligament; it is enlarged, one-fourth inch in diam-

eter. On the upper surface of the sac, behind and to the left of the *fundus uteri*, is a pocket covered with peritoneum, two and one-half inches broad, three to three-and-a-half inches deep (vide Case 1, Fig. 3). Case 1, Fig. 1^{10}.

The upper free border of the pocket, or broad ligament, forms a somewhat thickened *ridge*, which runs in an arch, first to the left backwards, then to the right, then divides into two branches, a lower one that runs downwards and to the right, an upper one that runs forwards to the left, pointing toward the left corner of the uterus. The ridge contains the left Fallopian tube (vide Figs. 1, and 3). The tube is seven inches long—the same as the right tube. It runs to the left backwards, in an arch, and then bends to the right downwards and backwards; here it leaves the broad ligament, and the canal enters the wall of the sac. How it terminates, if on the inside of the posterior wall of the sac (vide Case 1, Fig. 2), or not, cannot be made out for certain, because the sac is cut off here; but as there are no *fimbriæ* it does not open outside of the sac, and has undoubtedly opened into the foetal cavity.

The uterine portion of tube is of normal size, only permitting the passage of a very fine probe. The median portion of the tube is normal, perhaps slightly dilated, three to five lines wide.

The termination of the tube in the wall of the sac, Fig. 2^{12}, is an oval opening, one-fourth inch in diameter, the borders of which are perfectly smooth, no *fimbriæ* visible anywhere.

Of the left ovary, no trace can be found. The sac is clad on the outside with the peritoneum, and is smooth.

The wall of the sac is from one to eight mm. thick, white and firm. The thickest part of the sac is right behind the *fundus uteri*, one-fourth to one-half inch in thickness, and there the tissue, viz., fibers of the uterine tissue of upper surface

of fundus, is continuous with the wall of the sac; however, on the posterior surface of neck and fundus, the tissue of uterus is *not* continuous with the sac, but the latter is separated from the uterus by a short layer of connective tissue, that permits of dissection and leaves the posterior surface of uterus and wall of sac with smooth surfaces. This is the place where the placenta was situated. (Figs. 2^7 and 3^4.) The inner surface of the sac has an uneven, ragged or velvety appearance, most ragged over the site of the placenta, close to and behind the neck of the uterus. Outside of this region, there are numerous islands of uneven, ragged appearance, with more smooth spots between them. Several large vessels, one-fourth inch in diameter (vide Fig. 2^9), are found, partly free, partly adherent to the inside of the sac.

A microscopic examination of the wall of the sac shows the following:

a. In the site of the placenta.

1. An inner layer of free cotyledons or *fimbriæ*.

2. A layer of maternal tissue, with cross cuts of the cotyledons, imbedded in cavities (whether lymph spaces or blood vessels, I am unable to decide, but they look to me like venous blood vessels) tightly surrounding them.

3. A heavy layer of connective tissue bundles, interspersed with some organic muscle bundles.

4. Peritoneum.

b. A thick spot in the wall, near the peripheral opening of the Fallopian tube into the sac, which I examined to find ovarain tissue, presents exactly the same appearance as *a.*

c. A thin place in the sac, some distance from placenta and tube, gives,

1. An inner layer of areolar connective tissue without cotyledons.

2. A median heavy layer of connective tissue bundles and bundles of organic muscle fibers.

3. Peritoneum.

d. A third place in the sac presents the same layers as *a.*

Nowhere in the wall of the sac, is any trace of ovarian tissue to be found.

In considering the anatomical diagnosis of this case, I shall have to take into consideration mural, ovarian, tubo-ovarian and tubo-abdominal pregnancy.

1. *Can it be a mural or interstitial pregnancy?* The continuity of the sac (in the site of the placenta) with the upper surface of the fundus belongs to the signs of mural pregnancy.

The uterine portion of the Fallopian tube is of normal length and width, consequently, the ovum cannot have lodged and developed here. However, a persisting "Gärtner's duct" might, perhaps (it is doubtful), form a lateral branch of the tube and run in the wall of the uterus. Baudelocque, "the nephew," claims that a mural pregnancy can take place when the fecundated ovum lodges in this blind branch. Kleinwächter, in his article, "Tubal Pregnancy," in Eulenburg's Encyclopedia, remarks that this statement of Baudelocque's has yet to be proved.

Aside from Gärtner's duct, there is another anatomical anomaly that might give rise to a mural pregnancy, outside of the uterine portion of the Fallopian tube. Through the kindness of Professor Jaggard, of Chicago, my attention was called to this variety. The ovum may develop in a branch of a bifurcated Fallopian tube. Hennig* (Die Krankheiten der Eileiter und die Tubar-schwangerschaft) has an illustration showing a canal branching off from the Fallopian tube in the lateral wall of the uterus; the branch turns downwards and inwards in the uterine

* Lusk—"The Science and Art of Midwifery."

wall, and opens into the cavity of the uterus at the internal os. If the ovum is arrested in this branch, a mural pregnancy results. The sac will push the broad ligament and the appendices outwards and upwards, and we will expect, as in the ordinary mural pregnancy, to find Fallopian tube and ovary on the outside of the sac, and further, we must expect that the round ligament should be dislodged outwards some distance from the border of the uterus. Consequently, in our case, we cannot admit a bifurcated Fallopian tube as the seat of the pregnancy.

But supposing a mural pregnancy had taken place here, and consequently the uterine portion of the Fallopian tube could be found open outside of the sac: then we demand in this case certain conditions, that cannot very well be dispensed with, and they are the following:

The abdominal end of the Fallopian tube, together with the ovary, must be found somewhere on the outer wall of the sac, and opening into the peritoneal cavity.

Supposing that the ovary, for some reason or other, was not found and the abdominal end of the Fallopian tube was obliterated and buried in the wall of the sac, we might yet have had a mural pregnancy.

In this case, however, the Fallopian tube opens into the wall of the sac. If it has opened into the fœtal cavity, it can not be seen on this specimen. (However it looks as if it had probably done so.)

The round ligament in mural pregnancy is expected to be pushed outwards some distance from the side of the uterus. This might be different if the ovum could develop in the posterior wall of the uterus; but this possibility has never been proved. Gärtner's duct does not run in the posterior wall, but from the parovarium first in the broad ligament (in the same fold as the Fallopian tube), then in the muscular substance of the lateral

border of the uterus and down on the side of the vagina where it terminates blindly.

The sac can be dissected off from the posterior wall of the neck and *fundus uteri*, which looks as if the sac developed on the posterior surface and not in the posterior wall of the uterus.

Thus, although the positive proof against mural pregnancy, viz., the opening of the Fallopian tube into cavity of the sac, is wanting (the fault of the specimen), then as all signs of mural pregnancy are absent, except the apparent continuity of sac wall and uterus, I shall declare against mural pregnancy.

The microscopic examination of Dr. Byford's Case (No. I), (our second Case) does not give any points as to the solution of the question of mural or tubo-ovarian pregnancy; the sac here consists just exactly of the same elements as I have found in a case of abscess of the broad ligament, in a wall as thick as the sac in its thickest parts. The presence of organic muscle-fiber in the sac, and the continuity or connection between the muscle-fiber of sac and uterine wall is of only secondary diagnostic significance, for the following reason: the organic muscle fiber or cell belongs to the *proletaires* (so to say) amongst the tissues; it is of the connective tissue class, can be formed and found everywhere where connective tissue is formed and found. In fibro-myomata or myo-fibromata, it is often impossible to determine what is a muscle cell and what is a spindle-shaped connective tissue cell. Consequently, continuity between muscle-fiber in sac and muscle-fiber of the uterus does not mean that the former originated in the latter.

The next question then is this: Is it an ovarian, tubo-ovarian or tubo-abdominal pregnancy?

In an ovarian pregnancy, we require, (1.) that the Fallopian tube does not participate in the formation of the sac (Kleinwächter). (2.) Ovarian tissue is found in the wall of the sac.

(3.) That there is a connection between the sac and the uterus through the *ligamentum ovarii.*

Of a tubo-ovarian pregnancy, we would require (1), that the peritoneal end of the Fallopian tube participates in the formation of, that is, opens into the sac, (2), the ovary may be intact, but it may also have been used up in the formation of the sac and have disappeared either entirely or only remnants may be found in the wall of the sac.

(It is easy to see how difficult it may be to find microscopic remnants of ovarian tissue in the wall of a sac one hundred times or more the size of a normal ovary).

As near as we, in my opinion, are able to to come to an exact diagnosis in this case, I should pronounce it a *tubo-ovarian pregnancy.*

The exact location of the spot where the fecundated ovum has commenced development, it is of course impossible to prove to satisfaction. Still there is one interesting feature in this case, which, in my opinion, throws some light on this point. This is the pocket, the blind pocket, on the upper wall of the sac behind the uterus, (vide, Fig. 1^{10}, and 3^{8}.) As before stated, the upper side of the posterior wall of the pocket, viz., the *ligamentum latum*, or the Fallopian fold of this ligament, forms a circular figure, commencing at the left border of the fundus and terminating at about the same point; from the connection between the middle and outer third, a branch goes off downwards and to the right. The Fallopian tube is contained in the first two-thirds of the ridge and in the branch. The final third of the ridge, that does not contain the tube, but runs back towards the left corner of the uterus, would, in my opinion, correspond with the *ligamentum ovarii.* (Case I, Fig. 1^{7}) The formation of the pocket, clad with the peritoneum and having as upper border, the above-described ridge, can, in my opinion,

be explained if the ovum has been arrested and commenced development in the *ligamentum "infundibulo-ovarianum"* (Henle) between the *fimbriæ* that line the sulcus leading from the distal end of the ovary to the *ostium abdominale* of the tube. If the ovum is developed here, it can, with the vessels of the chorion, first, reach the abdominal ostium of the tube, and thus permit the tube to open into the sac. Second, it can reach down on the lower or posterior surface of the ovary, and thus during its growth lift up the ovary at the same time as it destroys it, but in lifting it up, preserve and enlarge the peritoneal fold or pocket that normally exists between the posterior surface of the peritoneal fold containing the Fallopian tube and the anterior surface of the peritoneal fold containing the ovary and the *ligamentum ovarii.*

In case the fecundated ovum, from the ruptured Graafian follicle, had dropped down below the ovary, and had been arrested or taken hold on the peritoneal surface of Douglas' fossa or on posterior surface of ovary, if a development in such a way and place is possible, the pocket could be formed of course, but we could not expect to have the Fallopian tube open into the wall of the extra-uterine sac. If the pocket in question is formed in cases where the ovum has been arrested in the peripheral end of the tube, I do not know, as my access to original literature on this subject has been extremely limited, and the common text and hand-books, of course, do not contain anything like a detailed description of any of the cases in question.

In the proceedings of the meeting of the Gynecological Society of December 19th, 1884, Professor W. H. Byford is recorded to have said, (CHICAGO MEDICAL JOURNAL AND EXAMINER, Jan., 1885, p. 64) as follows: in the first Case (our Case No. II, where operation was performed), he thought that the fecundated ovum had passed through the tube, but found some

diverticulum in the uterine cavity, had passed into the uterine wall and developed in this region, pushing the wall before it. The muscular element of the sac was directly continuous with the uterine muscle. Further, p. 64–65: "It is not necessary for the production of mural pregnancy that the tubes be involved."

A Diverticulum in the uterine wall that would permit the ovum to develop down between the muscle in the wall, is as far as I know, not known or proved, but such a condition might be accepted in a proved mural pregnancy in which the Fallopian tubes were not involved.

A Gärtner's Duct, as place of development for the ovum, is not proved either. But accepted as a possibility, let us see what would be the consequence. The ovum would be arrested either in the extra- or the intra-uterine portion of the duct. (I do not know of any communication opening between Gärtner's Duct and the Fallopian tube; does it exist?) If developed in the *extra-uterine portion* of the duct, that runs in the Fallopian fold of the broad ligament, the formation of the pocket in this Case (No. I) would be impossible. The ovary might disappear and the tube might run in the wall, but ought to open into the abdominal cavity.

If developed in the intra-uterine portion of Gärtner's Duct, we would expect to have the Fallopian tube and the ovary intact on outside of sac, just the same as in mural pregnancy from the uterine portion of the Fallopian tube. How great value in diagnosis of mural pregnancy, the fact has, that the muscle of the uterus is continuous with the muscle of the sac, I do not know; but in this case, apparently only the layers of the surface of the uterus are continuous with those of the sac, and in mural pregnancy I would rather expect to have the deeper layers participate also.

In conclusion, I shall proffer my thanks to the Society for

the honorable task entrusted to me, and ask its pardon in that the material in question, and the literature at my disposal have not enabled me to give a more satisfactory report of the matter.

214 East Ohio Street, Chicago.

ARTICLE III.

FUNCTIONS OF THE MEMBRANES IN LABOR.

HENRY T. BYFORD, M. D., OF CHICAGO.

[Read before the Chicago Gynecological Society, Feb. 20th, 1885.]

"It is hardly an exaggeration to state that the greater portion of the sins of midwifery practice are committed in the management of natural labor," says Lusk, in his "Science and Art of Midwifery," page 202, and on page 238, again, "The *os externum* is usually torn, especially upon the sides, and the thickened labia roll outwards."

Other reliable authorities teach that one-fifth of the number of mothers suffer laceration of the perineum at the birth of the first child. Hæmorrhoids are said, by Barnes, and are generally considered, to be common results of ordinary labor. With such facts before us, we may well wonder, with the late Professor Gross, "why the Almighty did not create, simultaneously with woman, a competent gynecologist to meet these inevitable evils." It seems, indeed, like a reproach upon Him, the crowning work of whose intelligence was the creation of woman, that she should be the most poorly prepared of all beings for the reproduction of her kind. Was it always thus, or was child-bearing originally a "physiological phenomenon, not beyond the power of a healthy woman to patiently endure?"

If civilization be at fault, then we must again admit, with Professor Gross that "the sooner we get rid of this civilization the better will it be for our poor wives and daughters as pro-

creative beings." Or, if the above quoted "sins of midwifery practice" have anything to do with these evils, it is time we were abandoning some of the things we have learned in the past six thousand years, and that the management of natural labor, especially the care of the perineum, were so taught as to come within the mental grasp of the ordinarily intelligent medical graduate.

The departure from the methods now taught, upon which I wish to get an expression of your opinion, is the preservation of the membranes from rupture until they dilate, or aid in dilating, the vulva, as they are sometimes observed to do when they are unusually tough and the child is born with a "caul." I shall first say a few words about the possibility and probability of such a procedure and afterwards about the utility.

According to the present obstetric teaching, and practice, I believe, the patient in labor is encouraged to go about the room until near the end of the first stage, thus, whether purposely or not, stimulating the uterus to contraction and adding gravitation to the other forces that bear upon the membranes in the cervix. This practice, with subsequent pulling at the os with the finger, or pressure upon the abdomen whenever the pains lag a little, or both, often has for its effect the discharge of the amniotic fluid, at, or near the end of, the first stage. If, however, pursuing an opposite course, we put the patient to bed upon her side as soon as, or soon after, the os commences to dilate; and if the pains are more severe than can be easily borne (as they are apt to be in highly civilized communities), we give an opiate, or other anodyne, to keep her comfortable, the presenting bag will be relieved of the weight of the abdominal contents, and saved from the more intense and frequent action of expulsive powers that accompanies an erect, or semi-erect, position.

After the os is widely dilated, and the membranes receive but little support from the cervix, they will be less liable to rupture if we put the patient upon her back during uterine action. The head will be better able to form a ball valve, and thus take part of the pressure from the presenting pouch, viz.; as much as is required to overcome the elasticity of the ring of the cervix against which the descending head impinges. Now, after the os is widely dilated, when the resistance to the descent of the head is small, and the consequent strain upon the protruding membranes great, a change occurs which invalidates the reasoning by which some of the German authors, would make their rupture, or the bringing of labor to a stand-still inevitable at or near the complete opening up of the uterine neck. The membranes, being loosened from the lower segment of the contracting uterus, are pushed down through the dilated cervix along with the head, instead of being merely stretched; they come in contact with the undilated vagina and are supported by it; and, as the whole parturient canal is converted into one cavity, the head follows the bag of waters down to the vulva, just as it followed it down to the external os, aiding in the dilatation, and sharing the pressure from behind. The second stage of labor becomes a kind of repetition of the first, the dilatation of the vagina and vulva being an analogue of that of the cervix and external os.

The Germans divide the expulsive powers of the uterus into two factors, the "internal uterine pressure" and the "form-restitution power." The "internal uterine pressure" is the uniform pressure to which the whole ovum is subjected; the "form-restitution power" is the shortening of the uterus from above downwards and from side to side. When the os is fully dilated, the "internal uterine pressure" forces the lower end of the bag of membranes down into the vagina because

that is the direction of the least resistance, but the "form-restitution power," by shortening the uterus from above downwards, forces the head down against the cervix, aided by the shortening of the transverse diameter, which tends to keep the body of the child from being displaced sideways. Now, all of these forces are acting in a downward direction, and the os being dilated, and the membranes loosened, what is to prevent them from descending to the vulva?

The membranes, with such management, are subjected to no more strain during the second stage of labor than they are under the prevalent mode of treatment, during the first stage. In fact the pressure upon the membranes under the ordinary start-on-the-run management, is not usually sufficient to rupture them as early as is commonly supposed. In my experience they have either ruptured at or near the beginning of labor or else persisted after the os has been dilated. Students are taught to rupture at the end of first stage; and nearly all of the physicians I have consulted usually find it necessary to do the same. Indeed, recent graduates are apt to betray a thrill of pride at the recital of the number of times they have successfully performed this hair-pin obstetric operation.

Playfair states, page 251, that a child would more frequently be born with a caul "* * were it not the custom of the accoucheur to rupture the membranes artificially as soon as the os is completely opened up * *" Leishman, in the second American edition of his "System of Midwifery," 1875, page 261, says, in describing labor: "As the termination of the first stage approaches, the protrusion of the bag of the membranes becomes more and more marked; and as at the same time the pains usually become more violent, it often excites our astonishment that rupture is so long delayed." The only really astonishing thing is that one of such profound learning should be so often astonished at the same occurrence.

Scanzoni states, page 338, vol. I.: "For it often happens that the child is expelled immediately or shortly after the rupture of the membranes," an occurrence that must either be the result of a dilatation of the vagina by the membranes, or else an already dilated condition. In those cases where the soft parts are flabby and can offer no resistance to the passage of the head, the preservation of the membranes is, of course, unimportant; and as the vagina affords no support, they are liable to rupture at any moment after the os is opened up. But in primipara and multipara, whose soft parts had returned to a natural condition after previous confinements, every attention, even the slightest, that makes labor safer and easier, is of great importance.

Naegele not having been obliged, in his day, to maintain his reputation for learning by an analysis and theoretical discussion of the profusely titled powers and pressures of the gravid uterus, made himself quite comprehensible by simply advising against rupture of the membranes until their appearance externally at the vulva.

The following is a fair sample of a large proportion of obstetric cases in my practice since I have adopted this plan:

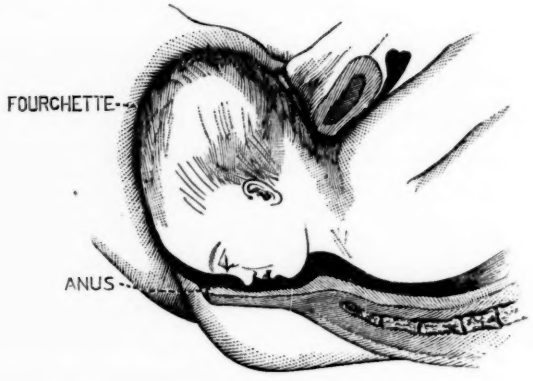
Mrs. M——, a healthy, robust, Canadian primipara, twenty-five years old, sent for me at 5 A.M. I found her suffering intensely with very frequent and very painful uterine contractions, which had commenced about six hours before. The os uteri was dilated to about the size of a silver twenty-cent piece, and in another hour to, perhaps, the size of a silver quarter, of a dollar, and the pains continued as before. I prescribed fifteen minim doses of McMunn's Elixir of Opium, to be repeated every hour until easier, and left her for two hours. I returned to her soon after she had taken the third and last dose and found her dozing between pains and not complaining at all. I

ruptured the membranes after they had protruded through the vulva and delivered her at 10 A. M. No unusual symptoms occurred then or afterwards, except that she (I use her own expression) "had the baby almost without any pain."

When the membranes are ruptured at the end of the first stage, there results, after a temporary rest, a rapid and very great change in the character of the labor, but when they are preserved from rupture it is impossible to tell, without the finger in the vagina when the first stage ends and the second begins. The torment that belongs to the stretching of the cervix subsides, and the labor gradually assumes a straining character, but only at the last moment, after the vulva is dilated to half or two-thirds of the size necessary for the exit of the head, is that severe suffering felt, of which primipara are otherwise wont to complain as soon as the head commences to bulge the perineum, or even after. The vagina is filled with a tumor so smooth and soft that its presence cannot be felt by the patient at any one point, so elastic that a light finger touch indents it, and yet the whole power of almost every uterine muscular fiber, bears efficiently upon it.

'Tis strange that obstetric science can teach the deliberate breaking up of this simple process of nature and the substituting of an unnatural and artificial one, by which nearly all of the fibers of the lower half of the uterus operate only to contuse its own structure against the bare parts of the fetus without materially aiding in its descent, while the fibers of the fundus jam the hard, rough, inelastic, and comparatively unyielding head, down through the vagina against the perineal center, bulging and stretching the perineum, according to Lusk, "from four to five inches in its antro-posterior direction," and all of this without any provision for a gradual dilation of the

vulva, or of making its axis, before delivery of the head, correspond with the axis of the pelvis.

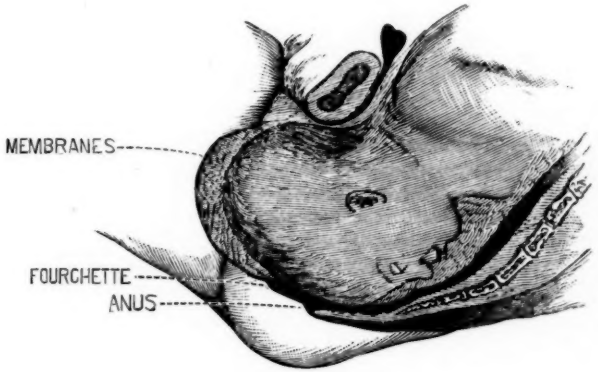


After Schroeder.

Let us glance, for a moment, at the mechanism of dilatation of the perineum and vulva by means of the membranes: When the pouch reaches the vulva, it becomes conoidal, and begins to protrude during pains, changing its shape according to the requirements, in much the same manner as in dilating the cervix and os; and as it protrudes more and more, the fourchette descends to within about half an inch, or less, of the anal orifice. The perineum thus, instead of being bulged and stretched to form a thin cap over the presenting part, is stretched only in the direction of its transverse diameters; the transverse muscular fibers, instead of being farther separated with each pain, as when the head is the dilator, are brought nearer together, and hence, instead of being ruptured separately and easily, can be ruptured only as a solid mass, and with proportionate difficulty.

The posterior wall of the vagina, instead of being ballooned, is but slightly stretched along its antero-posterior diameter,

and hence is not liable to that attenuation or transverse rupture which makes a sort of pouch or pocket for the child's shoulder to catch in and tear through the perineum.



There are other reasons for keeping the membranes intact: malposition of the head in the pelvis can more often be determined before rupture, and be corrected later and with greater facility. The body of the child cannot easily be grasped by irregular or tonic contraction of the uterus, as it occasionally is after rupture, when the parts of the child impinge upon the interior of the uterus—a condition of affairs which, when present in only a slight form, sometimes renders impossible the rotation of the occiput forward without disastrous twisting of the child's neck. The cord is much less liable to prolapse, and, if prolapsed, can be more easily made to slip back into the uterus.

After the membranes have once protruded through the vulva, they are, of course, liable to be ruptured with any strong pain, and if they do rupture before complete dilation, there will be a liability to some contraction of the vulva before the head can descend to take the place of

the membranes. In such instances there is, of course, some delay in the delivery after their rupture. After having ruptured them too soon in a number of instances, I now wait until the head threatens to come through with the membranes intact, and, in order to keep them so until then, I advise my strong patients not to bear down much, or else give a little chloroform with each pain. We can usually, by thus diminishing the pressure, delay rupture long enough for the head to be delivered with or between the succeeding pain or two. The uterus not having been long in direct contact with the fœtus, the least possible injury will occur to each; the vagina will have suffered neither from dragging down nor friction, nor will the hemorrhoidal circulation be long interfered with. But above all, the perineum will have been taken care of, and Goodell's riddle of the sphinx be solved.

Whenever the membranes rupture before their office of dilating the vagina or vulva is completed, a strong or covered rubber-bag may be introduced and then inflated with water or air, until it fills the lower unoccupied part of the vagina, so as to be made to dilate the vulva, during pains, somewhat after the manner of the membranes themselves. When a rubber-bag is not at hand, the vulva can be partly dilated by two or three fingers placed in the vagina and pressed backwards gently, but firmly, with each pain, and the capping of the head by a membranous perineum, wherein lies the chief danger to its integrity, be prevented.

3100 Forest Ave.

EDITORIAL.

It is a matter of regret that it becomes necessary to announce that Dr. James Nevins Hyde, the senior editor of the JOURNAL AND EXAMINER, has found that the numerous other demands upon his time have compelled him to relinquish his editorial work. This regret will be shared by the readers of the JOURNAL AND EXAMINER, who, for so many years have been favored with his editorials. It is, however, gratifying to be enabled to assure our readers that, from time to time, they will still be favored with an article from his pen, one of which forms the leading article of this month's issue.

WASHINGTON L. ATLEE AND THE REVIVAL OF OVARIOTOMY.

Sir Spencer Wells, Bart., has recently delivered a lecture, before the Midland Medical Society, on "The Revival of Ovariotomy and its Influence on Modern Surgery." While admitting that Ephraim McDowell, of Danville, Ky., was the first ovariotomist, Sir Spencer Wells claims the honor of naturalizing the operation.

Dr. Thomas Addis Emmet acknowledges the service of the great English surgeon as paramount to all others "in popularizing the operation and making its details so familiar."

An editorial appeared in the columns of the *Medical Record*, of New York, February 21st, 1885, which alludes to the revival of ovariotomy, in the following terms:

"The theory of the operation seemed rational in conception, but disproved by results attained. There was no one to champion the cause, eliminate its errors, and bring victory out of seeming defeat. In 1858, Sir Spencer Wells set out on his mission of rendering ovariotomy a justifiable surgical expedient."

These anachronistic improprieties may be explained by the notable omission of the study of the history of medicine in the *curricula* of both English and American medical schools. While it is difficult to overlook the insularity of an Englishman, it is impossible to pardon the ignorance of an American.

Chrysmar (1819), Nathan Smith (1821), Lizars (1823), Granville (1827), Ritter (1832), Quittenbaum (1834), Stilling (1841), Charles Clay (1842), contributed to our knowledge of conditions, indications, and operative *technique*.

Dr. Washington L. Atlee, of Pennsylvania, however, deserves the credit of enfranchising the operation. The period of Dr. Atlee's activity dates from 1843. The publication, in 1855, of Dr. Atlee's first thirty cases marks an era in the history of the operation. The prize essay of Dr. G. H. Lyman, of Boston, published in the following year, materially strengthened Dr. Atlee's position.

Operators and writers multiplied with astonishing rapidity, after the publication of Dr. Atlee's first thirty cases. It is foreign to our purpose to trace the history of ovariotomy until 1858.

The Germans, with characteristic justness, ascribe to Atlee the position, which Sir Spencer Wells has arrogated.

Professor Carl Braun, one of the most critical and accurate bibliographers of the day, writes in his *Lehrbuch der gesammten Gynækologie, Wien, 1881*, p. 936: "W. Atlee performed it (ovariotomy) two hundred and forty-six times, from 1843 to 1871, and by this has contributed the most to its enfranchisement."

ABSORPTION OF SALICYLIC ACID.

From time to time, very interesting and important facts are developed in the Biological Laboratory of the University of Pennsylvania. Dr. N. A. Randolph and Mr. Samuel G. Dixon have recently published a suggestive note on the absorption of salicylic acid (*The Medical News*, Feb. 14th, 1885.)

Salicylic acid, rubbed up in a thin paste with olive oil, was applied to the uninjured skin in seven cases of rheumatism. In each of the seven cases, the presence of the drug in the urine was demonstrated by the ferric chloride test. Existing rheumatic attacks were relieved in six cases; a negative result was obtained in one case.

The constitutional impress of the drug was obtained by its application to the axilla, side of the chest, and the affected joint. From the happy result of the application to the inflamed joint, Dr. Randolph and Mr. Dixon are inclined to believe that the remedy has a specific local effect.

The drug proved an irritant to the skin in but one case.

The advantages of the exhibition of salicylic acid by the skin are numerous and important. The irritant effect of the remedy upon the gastric mucous membrane, and its disagreeable taste, frequently contraindicate administration *per os*.

The subject is worthy of thorough investigation. Quinine has been exhibited by inunction for a long period of time. Absorption, however, is neither so rapid, nor so certain, moreover, the local action of the drug on the skin is of a highly irritant character.

PATHOLOGISTS' FEES.

"Gentlemen! No money can be made out of dead men," said a distinguished pathological anatomist, a few months ago.

The remark was made to ten or twelve *internes* of one of our large metropolitan hospitals, who were collected around a dissecting table, noting with keenest interest, the deft strokes of the knife in the master's hand, and listening to his lucid interpretations of morbid processes. It was suggested by a word from one of the gentlemen, who expressed his intention of qualifying himself for similar activity.

The *animus* of the remark is obvious. The pathologist had learned, by bitter experience, the essential difference between liberal and professional education. He was anxious to deflect the attention of hot-blooded, impulsive youth,—inclined to reject the proposition that man "liveth by bread alone,"—from the contemplation of pure science, to what the Germans aptly term the *Brodwissenschaften*, which may be translated, *The Bread and Butter Sciences.*

In other words, the pathologist, in the selection of his figure, wished to impress upon the minds of his auditors an idea, old as the history of philosophy, admirably expressed by Sir Wm. Hamilton.

"It is manifest, indeed, that man, in so far as he is a mean for the glory of God, must be an end unto himself; for it is only in the accomplishment of his own perfection, that, as a creature, he can manifest the glory of his Creator. Though, therefore, man, by relation to God, be but a mean, for that very reason, in relation to all else is he an end."

But it is evident that under the condition of society, individual men are, for the most part, to a greater or less degree, actually diverted from the end of existence.

"To live, the individual must have the means of living; and these means (unless he already possess them) he must procure,—he must purchase. But purchase with what?

"With his services, *i. e.*—he must reduce himself to an instrument,—an instrument of utility to others; and the services of

this instrument he must barter for those means of subsistence of which he is in want. In other words, he must exercise some trade, calling, or profession."

In America, pathology is as separate and distinct from *The Bread and Butter Sciences* as metaphysics.

Is this so? Up to the present time, this has undoubtedly been the case. We hope an era of better things is about to dawn.

The Chicago Gynecological Society, at its regular meeting, Dec. 19th, 1884, established an important precedent.

When Professor Byford's two specimens of "Mural Pregnancy" were referred to a pathological anatomist for examination, a motion, relative to *adequate* pecuniary compensation, was carried.

The recent occurrence of four destructive fires in insane hospitals in Indiana, Pennsylvania and Illinois, and the merely cursory interest manifested by the public press, indicates the necessity for organized effort to secure public attention to the interests of the insane. The Coroner's investigation of the origin of the fire at Kankakee found that the Medical Superintendent and the employès did all in their power to save life and property, but were hampered in their efforts by reason of lack of suitable alarm, fire escapes, and appliances for extinguishing fire. The medical superintendents in all the hospitals in which fire occurred were not only acquitted of negligence but commended for their zealous efforts to remove the inmates. In each case the fire was found to have originated in causes which the utmost vigilance has always failed to fully control. Defective construction of buildings, faulty heating apparatus and incendiarism are the common causes of such disasters and will con-

tinue to be despite the precautions prompted by personal interest or devotion to public duty. For obvious reasons, hospitals should be fire proof. The great loss of life in the Kankakee fire, despite the highly creditable efforts of Dr. Dewey and his assistants, and the difficulty and danger attending the rescue of incarcerated inmates of the Philadelphia Almshouse, ought to convince the public of this fact.

The rapid increase of insanity in this country is a fact so tardily recognized by our legislators, that provision for the safety and intelligent treatment of this unfortunate class rarely meets the requirements of common benevolence, and is yet more rarely adequate to the reasonable demands of professional management. The proportion of the insane to the population of California in 1860 was 1 to 883, in 1880, 1 to 383. In an article in this journal, November, 1883, Dr. Clevinger estimated the proportion of insane to the population of Chicago as 1 to 383. In our actively moving and rapidly increasing population, with a steady influx of European paupers, the causes will probably long continue to maintain if not to increase these proportions.

If the care of the insane has been assumed as a public duty, it is a crime to neglect the details essential to its performance. The Kankakee horror emphasizes this fact and suggests a searching inquiry into the general management of insane hospitals.

Such an inquiry would disclose the fact that the neglect to provide fire apparatus and a water supply for a building crowded with helpless inmates, is a fair illustration of legislative negligence. It would show that political influence, the collusions of privileged contractors, and the biennial junketings of legislative committees are not inspired by a benevolent interest in the welfare of the wards of the State. It would

show that large sums are appropriated for architectural display, which, prudently expended, would afford security against fire. It would show that asylums are overcrowded, medical superintendents are overworked and the efficiency of their efforts abridged by factious opposition and political favoritism; that curable cases of mental disease are frequently neglected or placed under the care of unqualified physicians in charge of almshouses. A searching investigation would benefit the insane, the welfare of general society and the interests of medical science; it would develop an active and enlightened public interest that would inspire philanthropic effort and stimulate scientific progress. The medical profession should unite to promote this interest; the duty has grown with our knowledge of mental derangements and the essential for successful treatment, it has grown with a class of persistent and enthusiastic specialists who have labored under disadvantages which stupid opposition has unnecessarily increased, who have accomplished much for society and shared but few of its plaudits or substantial rewards. We are happy to observe increasing interests in the profession in this direction. The National Association for the Protection of the Insane is rapidly enlisting an influential membership who are urging clinical psychiatry in our medical colleges. Medical journals are insisting upon authoritative professional control of insane hospitals. The laity are beginning to realize the fact that insanity is a manifestation of physical disease in some degree amenable to medical treatment, that hospitals are provided, not merely for the custody of the insane to insure the safety of society, but chiefly for the cure and amelioration of disease. The correlative fact will soon be admitted, that the medical superintendent should be invested with the power to summarily discharge insubordinate employès, suspend assistants, in short, with the control of every

detail of management which can in any manner influence the welfare of his irresponsible patients. The tenure of office should depend only upon the skill and fidelity of service. Under such conditions, if uniformly adopted, it would be possible to compare results, and fix the responsibility for failures; a sense of security would promote a degree of efficiency which can never exist while official positions in insane hospitals are the footballs of political acrobats.

LOCAL NEWS.

HOME FOR INCURABLES IN CHICAGO.

The will of the late Clarissa C. Peck (widow of Philander Peck), who died Dec. 22, 1884, was admitted to probate on the 7th inst. The Peck estate is a very wealthy one, and Mrs. Peck's share amounts to nearly $1,000,000. The chief bequest of the will is that of clause 34, which provides for a home for incurables in this city. The bequest of all the property of the testatrix, not otherwise bequeathed, is to this noble purpose. The exact amount of the bequest is not definitely known, but it will exceed $600,000. The sum of money to be expended in the erection of suitable buildings, in furnishing the same, and in fitting up the grounds, is limited to $125,000. The site of the home will be in the city of Chicago, or township of Hyde Park, Cook county. A corporate organization is directed to be founded under the statutes of the State of Illinois within two years after the death of the testatrix. Among the trustees and corporators of the corporation occurs the name of Charles Gilman Smith, M. D.

The testatrix alludes to the scope of the institution and the functions of the trustees in the following terms: "While I wish said institution to be open to all incurables without distinction up to the limits of its means and capacity, yet I direct that its Board of Trustees shall have full power to exercise their

discretion in regard to the admission of patients, and also to the terms and conditions under which patients shall share in the benefits of said institution, and that said Board of Trustees shall have full and unrestricted power and control in all respects, subject only to the limitation that they shall endeavor to carry out the general policy herein indicated, and accomplish the greatest good possible for poor incurables with the means placed at their disposal."

The Illinois State Board of Health will hold its next meeting at the Grand Pacific Hotel in Chicago, on Thursday, April 16th prox. This is the meeting at which the annual examination of candidates for certificates is held, and such candidates are notified that the examination will cover the subject of preliminary education.

NEWS ITEMS.

General regret was felt by the medical profession on the announcement that the publication of the *Index Medicus* had been discontinued by the publishing house of its former publisher, F. Leypoldt, of New York.

Authoritative announcement is now made by its editors, Dr. John S. Billings and Dr. Robert Fletcher, that Mr. George S. Davis, of Detroit, Michigan, has undertaken to continue its publication on the same general plan as the preceding numbers.

THE NEW ST. LUKE'S HOSPITAL BUILDING.—Since the issue of the last number of the JOURNAL AND EXAMINER the new building for St. Luke's Hospital has been so far advanced that the patients have been transferred to it, and the hospital is in good working order.

The structure is not yet complete. The old buildings stand upon the ground which is to be used for the pavilion intended for the surgical wards and the ward designed for children. It is contemplated to remove the old buildings at an early date, and to proceed to erect the new pavilion, when the structure will present the form of a hollow square. The executive portion of the building extends east and west, whilst the pavilions are arranged to run north and south, so as to secure the greatest amount of exposure to sun-light in the wards and private rooms.

The heating and ventilation of the buildings are on the same plan as that of the John Hopkins Hospital. To avoid too high temperature from the steam heating, more radiating surface,

—in the direct radiation,—has been introduced, which, with the careful ventilation, gives an agreeable temperature in the building.

The accident ward and the dispensary are located on the ground floor, whilst the amphitheater, with the anæsthetizing and the recovery rooms, are at the top of the building, accessible by elevator. The amphitheater is remote from the wards and is placed where good light can be had.

In its construction and its internal arrangements, the hospital is fully abreast of the times.

The autopsy amphitheater—the wards for contagious diseases and the laundry are located in a detached building.

The authorities of the hospital have anticipated its continued growth and have secured additional ground adjoining, upon which an extension of the present building may be erected, when needed, which will be in keeping with the plan of the present structure.

The Illinois State Medical Society will meet this year in Springfield, on the third Tuesday of May, (19th).

The Executive Committee of the Sanitary Council of the Mississippi valley have, by direction of the Council, addressed a memorial to the President of the United States asking that the National Board of Health be convened and authorized to proceed to make such provision as may seem best, to secure the country against the threatened invasion of the cholera.

The death of William Braithwaite, M. D., the founder of the *Retrospect of Medicine*, occurred at his home in Leeds, England, on the 31st of January.

His son, Dr. James Braithwaite, will continue to publish the *Retrospect*, which was first begun in 1840.

COMMENCEMENT OF THE COLLEGE OF PHYSICIANS AND SURGEONS.—The third Annual Commencement of the Chicago College of Physicians and Surgeons was held at the Grand Opera House on Tuesday afternoon, March 10th.

The President, Professor A. Reeves Jackson, M. D., conferred the degree of Doctor of Medicine upon sixty candidates.

Professor R. L. Rea has resigned the Chair of the Principles and Practice of Surgery. He will lecture, hereafter, upon the subject of Military Surgery.

BOOK REVIEWS.

A Manual of Diseases of the Throat and Nose, including the Pharynx, Larynx, Trachea, Œsophagus, Nose and Naso-Pharynx. By Morell Mackenzie, M. D., London, Consulting Physician to the Hospital for Diseases of the Throat, etc., etc.

Volume II. *Diseases of the Œsophagus, Nose and Naso-Pharynx.* Wood's Library, August, 1884. Octavo, pp. VI., 400. New York: William Wood & Company. 1884. Chicago: W. T. Keener.

The name of Morell Mackenzie, of London, we associate intuitively, and deservedly so, with those of Turck, Czermack, Stoerk, and Schrötter, his German *confrères* and collaborators in the early development of the sciences of laryngology and rhinology. These special departments of medicine owe their very existence to the invention of various mechanical contrivances; instruments, first for precise diagnoses, then for treatment; and in perusing the pages of this work, one cannot but admire the keenness of conception and wealth of device, dis-

played by the author, in the many ingenious, and withal simple, inventions necessary to meet the indications.

Volume II is systematically arranged, the œsophagus, nose, and naso-pharynx, embracing sections IV., V. and VI. Each section commences with a lucid *résumé* of the anatomy of the respective organs, the clearness of which might have been still further enhanced by the insertion of a few good wood-cuts. This is followed by copiously illustrated explanations of the instruments employed, while at the head of each chapter is placed a comprehensive definition of the disease forming its subject, its synonyms, and equivalents. The history and complete bibliography of each individual affection will prove of the utmost value to future writers. They have been rendered possible only by residence of the author in the metropolis, with the most extensive medical libraries and a corps of able young assistants always at his command.

In the article upon Examination of the gullet, it is made perfectly evident that the art of auscultation of the œsophagus should no longer be regarded as an impractical refinement. Normal deglutition produces a certain sound, when of liquids and in the pharyngeal region, best described by the whispered word "*glouglou*," whilst lower down a variation, the true "œsophageal sound" becomes audible. Various diseases occasion modifications of these sounds, strongly suggestive to the familiarized ear. It is also clear from the author's experiments, that the lumen of the distended œsophagus is not circular but oval, flattened antero-posteriorly, and that œsophageal bougies should be made similar in shape, not round, but flattened antero-posteriorly, Fig. 2 representing a proper scale.

For actual visual examination of the interior of the œsophagus, Mackenzie has introduced an œsophagoscope, so simple in construction as to be available in most cases and by

any physician accustomed to the use of a head reflector and to the introduction of œsophageal instruments. He has utilized it in a number of instances. On one occasion he was enabled to diagnosticate various veins within the œsophagus. His diagnosis was verified by a subsequent hæmorrhage, thus definitely located. In another patient he diagnosticated and removed a small lamella of bone—a foreign body, which was not demonstrable upon sounding with the bougie, but which was causing urgent symptoms of dysphagia.

It is to be regretted that, in this connection, the apparatus of Mikulicz designed to illuminate the interior of the œsophagus and the cardiac end of the stomach by means of the electric light, should receive but passing notice. It should have been more fully elaborated. During the winter of '81 and '82, this instrument was successfully employed by Mikulicz in Billroth's wards of the Vienna General Hospital, and especially do we recall a case in which Billroth was enabled to see a carcinoma at the cardiac end of the stomach. The apparatus is somewhat complicated, consisting, however, chiefly of a tube which carries an electric light at its distal end along the œsophagus into the stomach.

All are familiar with acute traumatic œsophagitis, resulting from irritants and caustics in process of deglutition. Perhaps the most novel of causes, which are mentioned, is the sting of insects, accidentally swallowed, which occasion, not uncommonly, a very severe form of the disease.

Acute *idiopathic* œsophagitis, on the other hand, has been so rarely recognized that it has not been mentioned in most treatises. The author's experience embraces cases of this disease, occasioned by "taking cold," extension of inflammation downward, from the pharynx, some epidemics of angina having a remarkable tendency in this direction; extension up-

wards of a gastritis or gastro-enteritis, the rheumatic diæthesis, and the abuse of alcohol.

Cicatricial stricture of the gullet and the various methods of treating it: gentle dilatation, forcible dilatation, internal œsophagotomy, "œsophagostomy," and "gastrostomy," are all of them comprehensively discussed. When gentle dilatation has failed, the temptation is towards internal œsophagotomy,—to cut through the stricture from within. For this purpose Mackenzie has devised an œsophagotome, not at all complicated in construction, and well adapted to its purpose. The mortality reports of this operation, however, are not encouraging, and unless one would court the immediate death of his patients he must select carefully his cases. It is obvious that where the greater portion of the tube is involved in tortuous stricture, or where the obstructing ridges are vertical in direction, it is worse than useless to go slashing around in such a locality.

Quite amusing, as well as instructive, is the relation shown to exist between spasm of the œsophagus and various psychical influences. A gentleman returned to France, after an absence of twenty years, learned that his brother's death had resulted from the bite of a dog, by which he also had been bitten. He was seized with œsophageal spasm, which ultimately proved fatal. Another patient was seized with the characteristic symptom after a dog had *tried* to bite him.

In the anatomical preface to the section upon diseases of the nose, a *fourth* turbinated body is described, present, according to Zuckerkandl, in one-third of all cases, and, therefore, to be borne in mind; and among the instruments for posterior rhinoscopy we note with pleasure the uvula holder of Voltolini figured, and the inventor's method of using it explained. We have found this to be the only instrument of the slightest value in accomplishing its purpose. It will enable one at times to

obtain a good rhinoscopic image otherwise unattainable. The diagnosis between nasal polypus and hypertrophy of the turbinated bodies is specially emphasized, and with good reason. Differentiation between these two affections has not, hitherto, received attention in surgical works. Too frequently have portions of the turbinated bones been extracted by forceps under the impression that the nasal obstruction was due to polypus. "Polypi, though often bilateral, are seldom so symmetrical as is the thickening of the turbinated bodies, and whilst the color of the former is pale yellow or pink, that of the hypertrophied turbinated bodies is either bright red or dark red. Again, though the thickened mucous membrane pits a little under the probe, the entire body does not move, as in the case with polypus."

Tuberculosis of the nasal mucous membrane hitherto, apparently, a rare disease, the author believes destined to become much more common in the immediate future, because it will be looked for and will be recognized and reported. It may be seen either in the form of tumors varying from the size of a millet seed to that of a bantam's egg, or there may be but slight thickening and ulceration of the mucous membrane. Both forms show a preference for the septum, and occur usually in conjunction with tuberculosis elsewhere.

The general style of Wood's Library is well known; the print is bad, but the price is low. Other editions are published, both English and American. W. E. CASSELBERRY.

HENK'S ATLAS OF SURGICAL ANATOMY. *A Series of Plates Illustrating the Application of Anatomy to Medicine and Surgery. Translated by* W. A. ROTHAKER, M. D., *Lecturer on Pathological Anatomy, Miami Medical College.* A. E. WILDE & CO., *Cincinnati.*

This work will answer a good purpose for reference in refreshing the memory as to the relations of the different parts of the body. In the main, the illustrations are accurate and reliable, but we miss the coloring which makes Maclise's similar publication unsurpassed by any like work which has come under our inspection. It has some of the faults which are unavoidable, perhaps, by the attempt of the artist to make the different anatomical points show too plainly. The proper arrangement of the formation of the brachial plexus of nerves is not shown in any plate in the book.

Plate I shows the uvula as projecting below and beyond the upper edge of the epeglottis—a condition of things which would be far from pleasant to the owner of any such relation and one quite impossible.

Plate XIV, page 2. A section purporting to give the relations of the common carotid artery and internal jugular vein. These vessels are too far away from each other. Their distance increased in proportion, to bring it to the natural size, would give one a very erroneous idea of their relation, and it followed would very likely lead to the accident of wounding the vein. In the body they hug each other quite closely.

Plate XVIII is misleading in showing the relations existing between the common carotid arteries and jugular veins on the two sides of the neck. The rule seems to have been forgotten

that the left veins approach their corresponding arteries, while the right veins diverge from them.

The most serious fault to our liking is the fact, that the short descriptive texts of the plates are all printed together in the front part of the book instead of each text going with its corresponding plate as could, it seems, easily have been arranged, thus saving much trouble of reference.

Plate XLI and LXI are both defective in that they fail to show the commencement or any portion of the internal iliac artery. It is not possible to look into the pelvis from any point which will display the arteries as here given, or fail to show some portion of the internal iliac. There is an appreciable difference between a ligation of the primitive iliac and the external iliac—through this plate no distinction could be made.

CORRESPONDENCE.

My Dear Editor.—Although my last letter was from Paris, I believe I had not then been here long enough to give you much of interest; so, before leaving, I give you a few short notes of my impressions of this place, from a medical standpoint.

In Paris I find every one studies a specialty, but yet no one calls himself a specialist; for be it remembered, to be known as a specialist, here, is a mortal professional sin.

This at first seems paradoxical, it is true, but I will explain. The system of hospital service is such, that the attending physician serves from two to three years in a department, and then takes up another, and so on till he completes the round of all. Applications for admission to all the hospitals must come through the "Bureau Central," where they are assigned to the particular hospital, or department thereof appropriate to their several cases. This offers great advantages to the physician who desires to pursue a certain line of clinical investigation; for he has only to notify the Bureau Central of his intention, and all the cases in that particular line are sent to his wards. But, when his two or three years are up, he proceeds to some other department of clinical work, and thus I found Charcot, not as expected (after publishing a work on Renal Pathology) still investigating renal diseases, but now in charge of the Nervous Department of the Salpêtrière, devoting his time chiefly to the hysterical and the epileptic. I had

the pleasure of accompanying him through his wards, which are very extensive and exceedingly well conducted.

The Salpêtrière Hospital it will be remembered, is exclusively for women, and contains the vast number of 4,000 beds, and at present contains 3,000 patients under treatment. It is about 160 years old, built in terraces, not unlike private residences, scattered over, I should say, thirty acres of ground, intermingled with beautiful gardens. I went over the whole of it, even the kitchen, and the butchers' department, and I cannot speak too highly of the order, cleanliness and efficiency in its conduct. And this is the same in all the hospitals in Paris which I visited. The new Hotel Dieu Hospital is a very superior institution, which it should be, as it cost 45,000,000 francs, ($9,000,000). It contains between 600 and 700 beds. The main building encloses an open court, with very fine architectural effect, and from the outside project several wings. Its location just on the banks of the Seine, next to Notre Dame Cathedral, shows its solid architectural proportions from the outside, to very good advantage.

The hospitals in Paris are made very attractive to patients, and large numbers of paying patients go there by preference, and thus the accommodations have kept increasing, till now, I am credibly informed that, combined, they contain one bed to every seventeen of the whole population of the city. This seems scarcely credible when we remember that in London the ratio is only one in about two hundred.

With the old Ecole de Medicine, I was disappointed; in size and equipment, it cannot approach the Edinburgh University. The class-rooms are small and dingy, the museum of anatomy small, but the library is fairly complete. The Pathological Museum of Dupuystren, in an outside building, is well

arranged, and contains considerable material, but is in no way to be compared with the Hunterian Museum in London.

The new buildings, however, in course of erection for the accommodation of the faculty, when completed, will amply amend, in point of room, for any deficiency existing in the old school. They are very extensive, covering two blocks. The main building, fronting on the Boulevard St. Germain, is a magnificent and imposing piece of architecture; built of white stone, with massive carved figures above either side of the main door-way, which is the only ornamentation attempted, save the upper third of the front, consisting of a system of long porch-ways, after the Doric system, which gives a fine effect.

This building surrounds the old Ecole de Medicine, except the front of the latter, which faces to the rear, directly behind the Boulevard St. Germain. The next block of buildings is more plain and irregular, though built of the same white stone, and cover the block to the rear of the main building and face the old Ecole. The practical classes in anatomy already occupy these, and as I visited them I noted quite a number of female students dissecting in common with the male students.

A few days since an ambulance committee was formed for the purpose of insuring immediate attention for people meeting with accidents or sudden illness in the streets. This grew out of the fact that recently a case of injury was delayed some hours in reaching the proper hospital for treatment, which resulted in the death of the patient before he received proper medical attention. I understand the committee intend to adopt the New York ambulance system.

In France, all public medical service is rigidly exclusive, no foreign medical man is allowed to hold any position on a hospital staff, or to occupy a chair in any teaching institution:

Our own distinguished Brown-Sequard refused for a number of years to comply with the requirements, and become naturalized, even when offered a chair in the "Facultie," and it was only after France became a republic that his scruples were sufficiently overcome to permit him to qualify and accept the proffered honor.

In concluding this communication, I would express the opinion that it would be wise for the profession in America to be thoroughly alive to dangers of cholera next season, and to use all measures of precaution against its importation. It is my belief that it is almost certain to break out, at least in Paris, on the advent of warm weather, for these reasons. Cholera exists now in Paris, constantly; it is true only a few cases, some four to six or eight per week, I note by the official reports, as an average since I came; but during the first two and a half weeks of November it reached about 80, and was only apparently checked by cold weather.

The weather has been very cold here during my stay; in fact it has snowed nearly every alternate day, and if such weather will not completely subdue the disease (which it has not), the chances are largely in favor of an outbreak early in the summer. Of course on the extent of the outbreak, or the range of its extension, it would be superfluous for me to express an opinion. I only state what I find to be the facts, and local conditions that exist in Paris, and leave your readers to draw their own deductions. CHAS. W. PURDY.

Paris, Jan. 17th, 1885.

SPRAY IN OVARIOTOMY.

To the editors of the CHICAGO MEDICAL JOURNAL AND EXAMINER—*Gentlemen:* The following is an extract from a recent

work by Dr. Emmet (Emmet's Principles and Practice of Gynecology, p. 715):

"In this country I do not know of any prominent operator who now employs the carbolic acid spray."

This statement implies that the writer is not persuaded of the value of spray in ovariotomy. My own experience has led me to an opposite opinion. Indeed, I should not like to do a laparotomy for any purpose without antiseptic spray. I have been led to this conclusion by the results of one hundred and eighty-three cases of removal of cystic ovaries, of which I have lost only twenty-one; but more especially by the result of the last one hundred of these cases, only ten of which were fatal, while thirty-eight were consecutively successful. I feel that to omit the antiseptic spray would be to deprive the patient of one of the ready and efficient elements of success. As I can hardly hope for much better results than these I have cited and being quite content to let well alone, I shall hesitate before disturbing my present plan of operation by giving up a detail to which I attach much importance.

Very respectfully your obdt. servant,

JOHN HOMANS.

161 Beacon St., Boston.

February 17, 1885.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Meeting of December 15, 1884.—The President, Dr. D. A. K. Steele, in the chair; Dr. Liston H. Montgomery, Secretary.

Actinomycosis in the Human Subject.—Dr. John B. Murphy read a paper on this subject, in which he first gave an interesting summary of the literature of the disease, with references to twenty-eight cases of its occurrence in the human subject, and then reported two additional cases.

Case I.—June 28, 1884, he was called to see Mary M., twenty-eight years old, who stated that two weeks before, she had begun to suffer with severe toothache in the left side of the lower jaw. Shortly afterwards a swelling appeared in the throat, with great pain in swallowing and inability to open the mouth. The pain and swelling disappeared after her face and neck had been poulticed for several days. A few days afterward she was again attacked with toothache, together with an indescribable ringing in her ears. A swelling appeared in her mouth, on the outer side of the jaw, the pain grew more severe, and the swelling continued to enlarge up to the time that the speaker was called. On examination, he found a swelling behind the angle of the jaw, on the left side. The patient could not open her mouth more than three-quarters of an inch, and had eaten nothing for two days. The left tonsil was much enlarged, and filled most of the pharynx; a pale-yellow spot marked the spot where an abscess was about to break. A

large quantity of pus was set free with a lancet. She made a rapid recovery, and was about in a few days. She appeared to remain comparatively well until the 8th of July, but did not regain her strength, and occasionally suffered with toothache. A small swelling now appeared on the left side of the neck, below the jaw, accompanied by some pain and inflammation, and a few days afterward she again presented herself for treatment. The lump was about as large as a walnut, and the surrounding tissue was considerably indurated. Several carious teeth were noticed in the mouth. The "bunch" fluctuated and seemed to contain considerable pus, but only a small quantity was discharged (when it was punctured) not exceeding a few drops, and having a creamy appearance. A drainage-tube was inserted and an antiseptic dressing applied. On her return, two days later, the drainage-tube was removed, and about twenty drops of thick, creamy-looking discharge oozed from the opening. It contained peculiar sulphur-colored granules, which were recognized with the aid of the microscope as actinomyces. A number of specimens were then prepared and shown to Dr. Fenger, Dr. Bridge, and Dr. Kerber, who agreed with the speaker as to their nature. The patient was under observation for ten days longer, and each day new specimens were procured. As the swelling and induration continued to increase, and as the patient was sinking rapidly, she was advised to enter the City Hospital, and Dr. W. T. Belfield was asked to examine the case. He reported that the pus contained actinomyces.

After a few days of preparatory treatment, the growth was removed, with the assistance of Dr. Fenger, Dr. Belfield, and Dr. W. P. Verity. An incision was made, extending from the ear to the clavicle, parallel with the sterno-cleido-mastoid muscle. A mass of succulent tissue was observed, inter-

spersed with pus and gold-colored granules, penetrating the surrounding tissue. It was all removed with a knife and a sharp spoon. In some places this tissue penetrated from half to three-quarters of an inch. A carious tooth was removed, and a probe was passed down from the alveolus into the wound. A small portion of the angle of the jaw was chiseled away, and the alveolus and the canal were thoroughly scraped. After the wound had been cleansed, a tampon of iodoform gauze was inserted into the alveolus, drainage-tubes were placed in the wound, and the edges were approximated with silk sutures. Primary union took place, and the patient made a rapid recovery. She gained over twenty-six pounds in weight within five weeks, and was now in good health.

Case II.—Thomas C., eighteen years old, consulted Dr. Murphy September 3, 1884, and stated that, on the previous Christmas, when he was living in Ireland, he had begun to suffer with severe toothache in the lower jaw, on the right side, which lasted about two months. Then a swelling appeared at the angle of the jaw, and the pain subsided. Since that time the swelling had enlarged somewhat, and he had had more or less pain. On examination, Dr. Murphy found a carious tooth, and the swelling showed well-marked fluctuation. It was as large as a pigeon's egg and situated below the jaw. There was a little induration of the surrounding parts. It was punctured, and about ten drops of thick, creamy pus of a consistence and color that attracted his attention, escaped, so that he made a microscopical examination of it and found that it contained radiating threads. Not being satisfied with this examination, he asked the patient to call again, which he did in two days. Pressure on the swelling then caused a small amount of pus to exude, and this was found to contain perfect actinomycetes. Specimens were shown to Dr. Fenger and Dr. Bridge, who

recognized the parasite. The sinus was scraped out, and in ten days the parts were completely healed. The patient was seen four weeks later, and there was no evidence of the recurrence of the disease. About six weeks later the man again consulted the speaker in regard to a swelling in the same locality, somewhat larger than the first. It was opened, and a drainage-tube was inserted. The same characteristic pus was found, and it was examined by Dr. Fenger, Dr. Bridge, Dr. Belfield and Dr. Kerber, all of whom recognized actinomyces. The speaker had not seen the man since, but had learned that the opening had healed.

It would be seen from the summary Dr. Murphy, had given in his preliminary remarks, that in only one of the cases that had ended in recovery, had the disease begun in the lower jaw. Some of them appeared as diffuse phlegmons, some as chronic burrowing abscesses, and others as chronic suppuration of lymphatic glands, and, on opening the swellings, they were found to consist mostly of a mass of granulations, with but little pus, although Rosenbach had observed a moderate amount of matter in a few of his cases. Of the fatal cases, but two had had their origin in the lower jaw, the others originating in the internal organs, such as the lungs, the intestines, the oviducts, etc., and presenting no other symptoms than those of chronic suppurative inflammation, with little pain and no fever, but great emaciation. At the autopsies, the pus showed the characteristic granules, and the affected organs presented a honeycombed appearance, the spaces containing projecting masses of pale-yellow granulations and but very little pus.

The disease was very chronic in its course, its shortest duration, in the fatal cases, having been seven months, and the longest twenty months. The patients usually died of exhaus-

tion or pyæmia. Various metastases might appear, either to the heart, the lungs, or the intestines. Considering the great space invaded, the comparative freedom from pain and fever was specially noteworthy. In the matter of diagnosis, it was important to notice that the disease usually had its origin in the lower jaw, whence it extended to the neck, the vertebræ, and the thoracic cavity; that it might have its origin in one of the internal organs; that, although the fistulæ extended deep and in all directions, their boundary was very sharp and the surrounding tissue but little disturbed, this being characteristic of the granulations; and, above all, that the only pathognomonic sign was the sulphur-colored granule, which, under the microscope, presented characteristic radiating threads with club-shaped ends.

As to the prognosis, the external forms of the disease showed seventy per cent. of recoveries, while the internal forms showed only eighteen per cent. The average mortality was sixty per cent. The treatment would depend upon the situation of the disease. When it was local, it was sufficient to open the mass and scrape and drain the cavity, or merely open it and wash it out with an antiseptic solution, as had been done by Rosenbach in his five successful cases. If the deposit was of any great extent, its radical removal was necessary. When the disease invaded the internal organs, we were completely at its mercy, and could only treat the symptoms as they arose.

Discussion.—Dr. Christian Fenger opened the discussion, during the progress of which, a number of microscopic specimens showing the actinomycetes were exhibited. Dr. Fenger had seen the two patients, whose histories had been related, but could add nothing to what had been said. Rosenbach's treatment might answer in slight cases, but the course

of the disease was chronic, and it was often impossible to get at the deposit, even when its extension from the mouth was in the direction of the muscles of the neck, and especially was this the case when the swelling first formed at the angle of the jaw and the parasite got into the veins, resulting in metastases to the lungs or heart (and not on the outside of those organs). The fungi were too large to pass through the capillaries of the lungs, so that in case of such metastases, the patient was lost. If they got into the bronchi, or into the anterior or posterior mediastinum, not much could be done by medication, and they were beyond surgical treatment; hence a fatal result would follow. He would not hesitate to perform a radical operation wherever there was a sinus.

The President congratulated the author of the paper on the fact that he had been the first in this country to discover the disease in the human subject. He had been under the impression that the death-rate was about fifty per cent.

Dr. Tilly questioned the correctness of the diagnosis in the two cases that had been related. He had heard that an attempt had been made to inoculate a calf with the matter taken from one of the patients, and that it had failed. If that was the case, the diagnosis was not proved. Then, too, he would like to be assured that the specimens shown were really taken from these patients, and not from the bovine affection. He had seen the second patient after he had passed out of Dr. Murphy's hands, and recovery had followed within a fortnight after a tooth had been extracted. Why were not the diseased teeth extracted in both cases at the outset? He had no desire to throw cold water on the enthusiasm aroused by the alleged discovery, but he did not wish to see the Society take untenable ground.

Dr. Fenger replied that there was no longer any doubt as to

the nature of the cases; there was the convincing proof of the microscope. The fungi were large, and not the contemptible micrococci. He cited a case in which the tooth was extracted at once, and yet the patient lingered for fourteen months, and died of metastases to the lungs and the vetebræ. Even if a patient seemed to have been cured, he should present himself to his physician every month for at least six months, that it might be seen if the disease showed any tendency to return.

Dr. W. T. Belfield testified to the accuracy of the diagnosis in the first case, which he himself had seen, and he had no doubt as to the correctness of Dr. Murphy's diagnosis in the second case; that gentleman knew what he was about, and had treated his patients correctly. He thought a misapprehension was being spread abroad with regard to the actinomycetes; they were not minute germs, but plants that could be seen with the naked eye. The cases reported by the writer of the paper were the first that had been observed and recorded accurately outside of Germany. Mr. Treves, of England, thought that he had recognized a case, but the microscope had disproved his diagnosis. Dr. Belfield then showed a large piece of the jaw-bone of a cow that had died of the disease. Having been permeated by the parasite, it was very soft, so that it could be cut with a knife. The cow's head had been swollen to nearly double its natural size, the enlargement being chiefly of the bone itself.

Dr. Tilley disclaimed any intention of throwing discredit on the microscope as a means of diagnosis, or of questioning Dr. Murphy's skill; but he was sorry that he had not seen the patients. The fact that the second one had recovered so quickly had given him the impression that the disease could not be so very dreadful. He would repeat that it was a pity the teeth had not been extracted early, and he thought Dr. Fenger's remarks were in favor of the view he himself took.

Dr. C. T. Parkes had seen the second patient after Dr. Lydston had extracted the tooth, but he had expressed no opinion as to the diagnosis. In all such cases the microscope ought certainly to be resorted to, in order to establish the diagnosis, but it should be remembered that an alveolar abscess might at times prove a very formidable affair.

Dr. Belfield said that, if these were not cases of actinomycosis, then scarlet fever was not scarlet fever on anybody's diagnosis. The disease spread by continuity, and perhaps might be analogous to anthrax. Anthrax was trifling if we cut it out at once, and so was actinomycosis, but, if the latter was allowed to spread to the neck, the chest, or the vertebræ, it became not only dangerous but incurable.

Dr. Murphy, replying to some of Dr. Tilley's criticisms, adds that one of the specimens from the case of the boy had been somewhat impaired by having been put into glycerine. In regard to the test by inoculation, both a calf and a horse had died within six weeks after having been inoculated with the pus. It made not a particle of difference what Dr. Tilley believed, or whether the teeth had been pulled out or not; the disease was certainly actinomycosis—the same disease, historically, clinically, and classically, as had been described by Rosenbach, and as such it had received proper surgical treatment by opening, drainage, etc. The "germs" were easy of recognition, and were herewith presented.

Dr. Tilley deprecated the introduction of any degree of animosity into the discussion, but it was still a pity, he thought, that the teeth had not been extracted in the early stage of the affection.

Dr. G. Newkirk thought that the limited number of cases reported cast some doubt upon the diagnosis, although it was true that successful inoculation upon the lower animals, to-

gether with the microscopical appearances, made it very strong. It would be a pity to extract a tooth for every swelling of the jaw, for ninety per cent. of them could be cured by simple measures.

Dr. Fenger remarked that it was an error to suppose that these cases were the first that had been reported outside of Germany, for an Italian physician had reported a case that had turned out to be pneumo-actinomycosis.

Dr. J. J. M. Angear called attention to the desirability of the members' knowing, with regard to the particular slides shown, which of them represented specimens from the cases reported, and which those that had been taken from animals.

Dr. William P. Verity corroborated Dr. Murphy's statements in regard to the fungi.

Dr. Belfield then showed a number of specimens, and compared them with the plates in Ponfick's monograph, which everybody could examine to his own satisfaction. With reference to alveolar abscesses, a fungus might be present in them, or the actinomyces might be found in them, but no one had ever looked for it, and he doubted if the pus in one case in a thousand, or one in ten thousand, was ever examined.

Dr. Parkes asked if the incipient symptoms of actinomycosis were as severe as those of alveolar abscess.

Dr. Belfield thought the actinomyces had never been found to have effected a lodgment in a healthy human being or a healthy animal, but it had been found in the mucus of the tonsils in hogs.

Meeting of Jan. 5, 1885.—The President, Dr. D. A. K. Steele, in the chair.

The Late Dr. C. W. Chaffee.—The Memorial Committee

reported a preamble and resolutions eulogistic of the late Dr. Chaffee.

Diphtheria; the Germ Theory and the Alcohol Treatment.—Dr. G. H. Chapman read a paper on this subject in which he said that there was perhaps no known disease which had been so constantly and thoroughly discussed, and with regard to which we were still so much in the dark concerning trustworthy remedies, as diphtheria. Probably he would not be going astray if he stated that every physician was ready to adopt any method of treatment which offered a reasonable promise. Was the disease local in character, or did it involve the entire system? Both theories had their advocates. Perhaps the most recent and best-founded theory was that given by Oertel, and confirmed by others, that the disease was first local and afterward developed into a general disease, and, moreover, that the infection was kept up by the local disease. The micrococci first attached themselves to the laryngeal mucous membrane, where they multiplied and produced inflammation of the adjacent tissues, and the membrane became filled with micrococci, which forced their way between the epithelial cells. The cells began to die and ulceration took place. The mouths of the lymphatics opened and the micrococci passed in. Early in the disease no micrococci were found in the blood, but, after the constitutional symptoms had become severe, masses of them would be found in the vessels, and the germ invaded the white blood corpuscles, which after a time would be found filled with micrococci. They would be found in the kidneys and in the capillaries, forcing their way between the muscular fibers of the heart and throughout the body, leading to destruction of tissue. Wood and Formad, of Philadelphia, had found that the attempt to inoculate animals with the poison derived from an ordinary case of diphtheria, as it appeared in that city,

failed to produce the disease, but, when it was taken from subjects of a malignant type of the disease, they invariably succeeded in infecting the lower animals. They also produced diphtheria with micrococci cultivated in soups, even to the fourth or fifth generation.

They further found in ordinary saliva a micrococcus which could not be distinguished from that found in the membrane from the most malignant diphtheria, except that with those they could not produce the disease; and also that the action of the poison was in direct proportion to the virulence of the of the epidemic. The former writer thought that diphtheria was produced by micrococci that were present in everybody's mouth. These were some of the conclusions of those who had spent years in the investigation of this subject, with abundance of material at their disposal.

Granting that the deductions of these investigations were correct, there must be conditions for the rapid reproduction of the germs which were not yet understood; and might it not be that they found in the degenerated or septic condition of the fluids and tissues a good field for growth and development in an active form, and still were not the primary cause of diphtheria? But, whether the disease was purely local or general in its origin, whether micrococci were or were not the primary cause of its development, the stubborn fact remained that, in nine cases out of ten, when the physician was first summoned, he found abundant evidence of systemic disturbance, varying in intensity from simple circulatory excitement to the most profound prostration, like that of septicæmia.

A severe form of this disease was manifested in South Chicago during the autumn and winter of 1881–'82. In the first six weeks of the epidemic, the writer treated seven cases, with two deaths and one protracted recovery out of three mal-

ignant cases. The treatment consisted, *externally*, in the free use of camphorated oil with turpentine, and applying to the membrane every four or six hours, with a camel's-hair brush, a mixture of a drachm of carbolic acid, three fluidrachms of liquor ferri sub-sulphatis, and half a fluidounce of glycerine. The throat was gargled with a saturated aqueous solution of chlorate of potassium. *Internally*, tincture of chloride of iron and quinine were given, in doses suitable to the age of the patient, giving to a child, eight years of age, two grains of quinine and six drops of tincture of chloride of iron every three hours. In one of the cases that seemed to be malignant, but ended in recovery, dry sulphur was used after the fourth day, blown freely into the throat and nasal cavities after cleansing the parts with chlorate of potassium solution. There had been, up to this time, in all, about twenty cases in the immediate vicinity, with twelve deaths. Other physicians had had no better success in combating the disease. At this time the writer's attention was called to the free use of alcohol in this disease, by various publications, from which it appeared that alcohol was one of the best agents for destroying the micrococci or rendering them inert; and he determined to give it a fair trial, using it diluted, with chlorate of potassium as a gargle, especially using the latter remedy before the patient took either medicine, food, or drink. Dry sulphur was also used in the throat and nasal cavities, with the internal use of whisky-sling or milk-punch, as hot and strong as could be borne, and only to be limited by the amount which could be tolerated by the patient without producing intoxication, along with other agents, such as diuretics, antifebrile remedies, etc., as each case seemed to require.

As a result of this trial, his succeeding twenty-eight cases were carried to a successful termination with one exception, and in none of them was a brush or probang used.

The alcohol in every case could be used very strong; it would almost invariably cause the membrane to shrivel up like burning leather, and within thirty-six to forty hours every trace of membrane disappeared. Tincture of veratrum viride and deodorized tincture of opium were given in some cases for fever during the congestive stage only.

During the past two years the author had relied on the liquor-ferri-subsulphatis-and-carbolic-acid mixture applied to the throat with a camel's-hair brush twice or thrice a day, or still more frequently. He pursued this plan instead of blowing in sulphur with a bellows or through a goose-quill. The sheet-anchor, however, was alcohol in every stage of the disease, and, from his experience, he was led to think we could secure much better results with it than by the harsher methods o treatment.

[Here the author gave brief accounts of a number of illustrative cases.]

As before stated, only one patient of the twenty-eight treated with alcohol, was lost; a girl eleven years of age, of nervous temperament, who, six months previously, had had a severe attack of typhoid fever, from which she had not yet fully recovered Consequently when she was attacked by diphtheria of a severe naso-pharyngeal character, it was difficult to maintain her strength, and she died on the eighteenth day, from paralysis of the heart.

In July, 1882, the writer attended three cases of croupous diphtheria. The first two do not require any special mention. The third case of this series was under the care of another physician for two days before he was called. It seemed impossible for life to be prolonged an hour. However, a teaspoonful of a mixture of a grain of calomel, five minims of tincture of aconite-root, and four ounces of water was ordered

to be given every hour. Milk-punch and whisky-sling also to be given frequently. Instructions were given that, if the child lived until evening, he should be sent for. The child lived, and the treatment was continued. Upon visiting the little patient the following morning, he was greatly surprised at seeing the child running about the room dragging a broom and in high glee. It would be seen that great relief followed in this case within twelve hours. Doubtless the calomel had had much to do toward bringing this about.

Discussion.—Dr. G. C. Paoli thought the author was too prone to follow out routine treatment in diphtheria, whereas on such form could be laid down in this disease. Why? In malignant cases the patient might live only two, three, or at most five days, and this was not the fault of the physician. However, alcohol was no new remedy in these cases. It had been used forty years, chiefly, though, in the form of wine. Alcohol might be given in these cases to destroy fungi or bacilli, on the same theory that it was given as an antidote for snake-poison. But the question arose, would alcohol save patients where there was fibrinous exudation upon the tonsils, pharynx, and other parts; where it was of an ashy-gray appearance; where the maxillary and cervical glands were involved; where there was a dusky hue of the face, with cyanotic lips, and feeble heart and pulse, fœtid breath, hyperæmia of the brain, etc.? He would hesitate, on general principles, about giving the remedy. Instead, the first thing that should be done was to use antiseptics, such as oil of eucalyptus, which would destroy the bacilli. For young children, he would use it with an atomizer, for they could not gargle. Where there was ulceration of the naso-pharyngeal space, hæmorrhage might set in, and nothing would check it. Internally we should give tincture of iodine, in

water, for a child five years of age, four drops every hour; and apply any of the well-known antiseptics with a probe or brush to the throat. It was of no use to give them quinine and tincture of iron, for these remedies they could not take, and, besides, they interfered with the action of the kidneys and liver

Dr. R. Tilley desired to add his testimony to the special value of tincture of iodine in these cases, although no one remedy could be used in all cases. He also thought corrosive sublimate was beneficial, and he placed great reliance upon it. But he preferred the use of hot baths in the early stage of this disease as facilitating profuse perspiration instead of using veratrum viride. He was satisfied that bacteria were a causative agent of this disease.

Dr. J. J. M. Angear said that the microscopists had settled it that micro-organisms or microbes were a cause of diphtheria. Alcohol, as was well-known, destroyed vegetable growths. A fifteen-per-cent. dilution would prostrate or paralyze them, and, if its use was continued, would kill them. He therefore thought it a good local application. But these germs flourished best in a high temperature. We could not get alcohol as strong as a fifteen-per cent. dilution to circulate in the blood. Therefore, how did it kill them when the blood contained them? Then, too, why administer any alcohol and veratrum? Did not these remedies antagonize each other? There was harmony between the germ theory and the local use of alcohol. But he should think cold applications were preferable to hot drinks or to hot baths, for the reason that germs flourished better under a high temperature.

Dr. A. Leigh had found, in treating more than a hundred cases during the past four years, that, of all agents *per se*, hot or cold, there was none better than a concentrated or dilute preparation of the perchloride of iron. But in really malignant

cases no treatment was of any avail. Alcohol, hot or cold, was a good cardiac stimulant, but quinine would do better work. Tincture of iron would produce contraction or hardening and shriveling of the membrane. There was no doubt that micrococci were present in the throat in this disease. Therefore, if the cases were seen early, and the iron was applied, benefit would be derived, except where the case was profoundly malignant. Tincture of aconite was superior to veratrum to bring about free diaphoresis.

Dr. H. J. Reynolds had come to the conclusion that there were no remedies that had a specific effect on diphtheria. The most that could be done was to rely upon supporting measures to help the patient along until the disease ran out. If the membrane entered the larynx, he would advise inhalation of steam. He thought no benefit would be derived from alcohol or veratrum. When the disease was malignant at the onset, no treatment was beneficial.

Dr. A. Goldspoon had treated a hundred cases of diphtheria during the last two years. He had seen great constitutional disturbance present when the local signs were quite insignificant, and cited a case of this kind occurring to a little girl that died in ten hours from the time she was attacked. The system was so depressed that she died of heart failure. In such cases it would be reprehensible to administer aconite or veratrum. To reduce the temperature, he relied upon quinine. Alcohol could not be given sufficiently concentrated to act through the circulation as a germicide, although it might do good locally.

Dr. Paoli said that when diphtheria appeared in countries, and at a season when the temperature was very low, it was equally destructive. Alcohol might prove beneficial in some cases that were peculiarly asthenic.

The President recited an epitome of Morrell Mackenzie's views upon the pathology and treatment of diphtheria.

Dr. W. H. Wilson thought that we could not give sufficient whisky to a child having diphtheria to intoxicate it. Recently he had treated six cases of the disease in children, five of whom recovered, and to these he gave large quantities of alcohol. In the other case, the parents (on moral grounds) would not permit him to give the child whisky, and he was confident that, had he been permitted to do so, this child also would have recovered.

Dr. Chapman conceded the impossibility of producing intoxication in a patient having diphtheria. He maintained that by treating cases in this way, paralyses were made less liable to follow. He was sure it also quieted the cerebral symptoms such as delirium, and did not increase hyperæmia of the brain. Regarding the administration of veratrum and alcohol alternately, he did this during the first or congestive stage, or until perspiration was well established. We should begin the use of alcohol as early as we were sure of our diagnosis. By so doing, the fungi were destroyed and we prevented their entering the blood-vessels. If a few did enter the circulation, it was not so bad as if they passed in in swarms.

CHICAGO GYNECOLOGICAL SOCIETY.

Friday evening, Feb. 20th, 1885. Regular Meeting.—The President, Dr. H. P. Merriman, in the chair.

I. Report of Dr. Christian Fenger, on Professor Byford's "Two Cases of Mural Pregnancy."

II. Intra-mural Leio-myoma, exhibited by Dr. E. C. Dudley.

III. Functions of the Membranes in Labor, by Dr. Henry T. Byford.

IV. Two interesting Cases in Obstetrics,—Inaugural Thesis,—by Dr. Charles Caldwell.

I. Professor Christian Fenger presented a report of his anatomical investigation of Professor Byford's "Two Cases of Mural Pregnancy." (CHICAGO MEDICAL JOURNAL AND EXAMINER, Jan., 1885). The report appears in full in another column.

Professor Christian Fenger, after a careful microscopical and macroscopical examination, pronounced Case, No. I, *tubo-ovarian* pregnancy, Case, No. II, *tubo-abdominal pregnancy*.

On motion, Professor Fenger's report was accepted.

II. Professor W. W. Jaggard presented, for Professor E. C. Dudley, an intra-mural leio-myoma of the uterus. The fundus was more particularly involved; the cavity of the uterus was but slightly enlarged, and the *endometrium* was normal. The tumor weighed about fifteen pounds. Both tubes and ovaries were removed with the uterus. The ovaries had undergone extensive cystic degeneration.

The tumor was removed, by abdominal section in the median line, with supravaginal amputation of the vaginal portion of the uterus, both ovaries and tubes, on Friday, Feb. 20th, at Mercy Hospital. The pedicle was surrounded by *écraseur*, and rubber ligature, before amputation; subsequently, the pedicle was secured in Dawson's Clamp, and treated after the extra-peritoneal method. The peritoneum was carefully stitched around the lower angle of the incision and parietal peritoneum was, thus, united to visceral peritoneum.

III. Dr. Henry T. Byford then read a paper entitled,

"Functions of the Membranes in Labor."

Dr. Byford discussed fairly, clearly, and forcibly the possibility, probability and utility of the preservation of the membranes from rupture until they dilate, or aid in dilating the vulvo-vaginal orifice, as well as the cervix.

Dr. Byford's paper appears in another column.

Discussion.—Professor James H. Etheridge thought the paper well-timed.

Professor W. W. Jaggard, while not prepared to accept the thesis of the paper as a universal proposition, thought the attention to the functions of the membranes, advised by Dr. Byford, would go far to prevent cervical, vaginal and perineal laceration in many cases.

Professor D. T. Nelson said the membranes, when adherent to the cervix, as pointed out by Professor DeLaskie Miller, delayed labor. Under these conditions, puncture of the membranes was indicated. In practice, he tried to find out whether or no, the membranes were adherent to the cervix. If adherent, he punctured the membranes; if free, he always waited for spontaneous rupture.

Dr. Philip Adolphus agreed with the author of the paper in his conclusions, except in case of hydrammios. Under such pathological conditions, it was frequently necessary to rupture the membranes, in order to secure uterine contractions.

Professor J. Suydam Knox was in the habit of aiding dilatation of the vaginal os with the finger. He was under the impression that the membranes were seldom operative in the dilatation of the vulvo-vaginal orifice.

Dr. Edmund J. Doering had followed Dr. Byford's suggestion during the past year, and believed the method had prevented perineal lacerations in many cases. Premature detachment of the placenta was a possible danger from delayed rupture of the bag of membranes.

Dr. Edward Warren Sawyer believed that the membranes should not be punctured until the *os uteri* was dilated to the extent, which the pelvis, in the concrete case, would permit. The function of the bag of waters, in labor, was the dilatation

of the *os uteri.* He ruptured the amnion in one-half his cases. There was as great variation in the development of the uterine muscular tissue as in the development of the biceps. Retardation of rupture of the bag of membranes might lead to uterine inertia, or to premature detachment of the placenta. To follow Nature's suggestions was a beautiful theory; but Nature caused the membranes to be ruptured, in the majority of cases, before dilatation of the vaginal os. He was in the habit of aiding dilatation of the uterine os by the introduction of one or two fingers within the canal of the cervix; he also tried to peel off the membranes around the internal os, and was conscious that he had materially influenced, in a favorable direction, the process of parturition.

The periphery of the *os uteri* was less than the periphery of the vaginal orifice. It was inconceivable, under such physical conditions, that the bag of membranes, protruding through a smaller, could dilate a larger orifice.

Professor Charles Warrington Earle agreed with Dr. Sawyer that natural processes should be imitated, in the puncture of the bag of membranes, after complete dilatation of the *os uteri.*

Dr. H. P. Merriman thought Dr. Byford's paper contained excellent advice for the young practitioner. The thesis could not be accepted as a universal proposition. Dr. Sawyer and Professor Earle had pointed out the conditions, in which the application of the method was contraindicated.

Dr. Henry T. Byford, in conclusion, said that he had distinctly pointed out in his paper, that the retardation of rupture of the membranes was advisable only in perfectly physiological labors. The Fellows of the Society had called attention to pathological conditions, to which the method did not apply.

Dr. Sawyer had read a paper on "Occipito-posterior Posi-

tions," before the "American Gynecological Society," last October. A plausible explanation of the fact, that anterior rotation did not occur in Dr. Sawyer's thirty-nine cases, might be found in the premature rupture of the membranes.

IV. The inaugural thesis of Charles Caldwell, A. M. (Dartmouth), M. D. (Harvard), entitled "Two Interesting Cases in Obstetrics," was read by the Secretary.

Dr. Caldwell's two interesting cases were, (1) Ante-partum Hæmorrhage, caused by Accidental Separation of the Placenta; (2) Breech Presentation, with an Unusual Complication. The paper will appear *in extenso* in the CHICAGO MEDICAL JOURNAL AND EXAMINER.

Discussion.—Dr. Sawyer was surprised that a physician of the present day should disregard the opinion of Velpeau in the exhibition of ergot, when the cavity of the uterus was not empty, as Dr. Caldwell did, when he gave that remedy in his case of accidental hæmorrhage, from premature detachment of the placenta.

Dr. Henry T. Byford thought that the clinical observations of Schatz justified the exhibition of small doses of ergot, even when the uterus contained the fecundated ovum.

Dr. Charles Caldwell was then elected Fellow of the Society.

The Society adjourned to meet at the Palmer House, Friday evening, March 20th, 1885.

Professor Christian Fenger will read a paper—with demonstration of specimens—entitled "Chronic Peri-uterine Abscess."

W. W. JAGGARD, M. D., *Editor*,
2330 Indiana avenue.

February 21st, 1885.

BOOKS RECEIVED.

BOOKS AND PAMPHLETS RECEIVED.

Diphtheria, Croup, etc., or the Membranous Diseases, by G. B. Galentin, M. D. J. H. Vail Co. Chicago: W. T. Keener.

A Text-Book of Pathological Anatomy and Pathogenesis, by Ernst Ziegler. Wm. Wood & Co. Chicago: W. T. Keener.

On a New Method of Recording the Motions of the Soft Palate, by Harrison Allen, M. D. P. Blakiston Son & Co. Chicago: W. T. Keener.

Tex-Book of Medical Jurisprudence and Toxicology, by John J. Reese, M. D. P. Blakiston, Son & Co. Chicago: W. T. Keener.

A Manual of Diseases of the Throat. Vol. II. By Morell McKenzie, M. D. Wm. Wood & Co. Chicago: W. T. Keener.

Eleventh Annual Report of the State Board of Health of Michigan.

A System of Human Anatomy including its Medical and Surgical Relations. Section vi. By Harrison Allen, M. D. Henry C. Lea's Son & Co.

A Manual of Obstetrics, by Edward L. Partridge, M. D. Wm. Wood & Co. Chicago: W. T. Keener.

Practical Manual of Diseases of Women and Children, by Eustace Smith, M. D. Wm. Wood & Co. Chicago: W. T. Keener.

Practical Manual of Diseases of Women and Uterine Ther-

apeutics, by H. Macnaughton Jones, M. D. D. Appleton & Co. Chicago: Jansen, McClurg & Co.

Osteotomy and Osteoclasis for Deformities of the Lower Extremities, by C. T. Poore, M. D. D. Appleton & Co. Chicago: Jansen, McClurg & Co.

The Lock-Jaw of Infants, by J. F. Hartigan, M. D. Birmingham & Co.

A Practical Treatise on Fractures and Dislocations, by Frank H. Hamilton. Henry C. Lea's Son & Co. Chicago: Jansen, McClurg & Co.

The Ear: its Anatomy, Physiology and Diseases, by Chas. H. Burnett, M. D. Henry C. Leas Son & Co. Chicago: Jansen, McClurg & Co.

Atlas of Female Pelvic Anatomy, by D. Berry Hart. D. Appleton & Co. Chicago: Jansen, McClurg & Co.

The Elements of Pathology. By Edward Rendfleisch. Translated by W. H. Murcur, M. D. P. Blakiston, Son & Co. Chicago: W. T. Keener.

Index Catalogue of the Library of the Surgeon-General's Office, Vol. V.

Medical Rhymes. By Hugo Erichsen, M. D. J. H. Chambers & Co.

Myths in Medicine and Old Time Doctors. By A. C. Yanat, M. D. G. P. Putnam's Sons.

Malaria and Malarial Diseases. By Geo. W. Sternberg. Wm. Wood & Co. Chicago: W. T. Keener.

Diseases of the Nose. By Clinton Wagner, M. D. Birmingham & Co.

A Manual of Dermatology. By A. R. Robinson, M. D. Birmingham & Co.

Medical Diagnosis, a Manual of Clinical Methods. By J. Graham Brown. Birmingham & Co.

Lectures on Diseases of the Rectum. By J. W. Wright, M. D. Birmingham & Co.

Surgical Delusions and Follies. By John B. Roberts, A. M., M. D. P. Blakiston, Son & Co.

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Surgery of the Urinary Organs. By Sir Henry Thompson. P. Blakiston, Son & Co.

A Theoretical and Practical Treatise on the Haemorrhoidal Disease. By Wm. Bodenhamer, A. M., M. D. Wm. Wood & Co. Chicago: W. T. Keener.

A Practical Treatment on Massage. By Douglas Graham. Wm. Wood & Co. Chicago: W. T. Keener.

A Practical Treatise on the Diseases of the Ear. By D. B. St. John Roosa. Sixth Edition. Wm. Wood & Co. Chicago: W. T. Keener.

Swayne's Obstetric Aphorisms. Eighth Edition. P. Blakiston, Son & Co.

Micro-Organisms and Disease. By. E. Klein. London: McMillan & Co.

Conférènces Thérapeutiques et Cliniqués sur les Maladies des Enfants. Par le Dr. Jules Simon. Tome II. Paris.

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A Manual of Bandaging. By C. Henri Leonard, A. M., M. D. Second Edition. Illustrated Medical Journal Co., Detroit.

The Basic Pathology and Specific Treatment of Diphtheria and Zymotic Diseases, by Geo. G. Ziegler, M. D.